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Index to the Supplement  
TO  
THE CALCUTTA GAZETTE  
FROM  
JULY TO DECEMBER 1899.

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SUPPLEMENT TO  
The Calcutta Gazette.

WEDNESDAY, JULY 5, 1899.

OFFICIAL PAPERS.

[Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.]

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RESOLUTION ON THE ANNUAL REPORT OF THE ROYAL BOTANIC GARDEN, CALCUTTA, FOR THE YEAR 1898-99.

FINANCIAL DEPARTMENT.—MISCELLANEOUS.

*Darjeeling, the 1st July 1899.*

RESOLUTION—No. 3854 Mis.

READ—

The Report of the Royal Botanic Garden, Calcutta, for the year 1898-99.

Read again—

The Report of the Royal Botanic Garden, Calcutta, for the year 1897-98, with the Resolution recorded thereon.

The weather during the year was more normal than that of the preceding two years. The show of orchids regained its old standard of excellence, though, owing to the reduction in the stock caused by the unfavourable weather of several successive seasons of drought, and the increasing difficulty in replacing losses from forests which have lately been too thoroughly exploited, the actual number of plants in the conservatories was considerably smaller than in past years. During the year the gardens were improved by extensive repairs to the river bank and repairs to the Roxburgh Avenue were also taken in hand.

2. Especial attention was, as usual, given to the cultivation and distribution of plants of economic value. In connection with the question of rubber and taperecha, it has been ascertained, after examination of the milky juice of species of *Sideroxylon* belonging to the natural family Sapotaceæ, that, though these species do not yield a true rubber, the material obtained from them might prove capable of being utilized for the various purposes for which gutta-percha or India rubber is now employed. An interesting introduction to India



during the year was *Polygala butyracea*, an African species, which yields an excellent vegetable oil. The cultivation and the identification of living plants yielding Indian products of hitherto doubtful origin, to which subject a reference was made in the last year's Resolution, were continued during the year with good results.

3. The collection in the Herbarium was increased by 10,672 specimens, the chief donors being Sir W. Thiselton Dyer, Director of the Royal Gardens, Kew; the Director, Rijk's Herbarium, Leiden; Mr. Heer Buysmann, of Middleburg, Holland; Mr. Medley Wood, Natal; Professor Schinz, of Zurich; and Mr. Herr Schlechter, Berlin. Collections of Australian and Swiss plants were received respectively from the Government Botanist, Melbourne, and the Director of the Cantonal Museum, Fribourg; while collections of plants from the Eastern and Southern United States and from Mexico were acquired by purchase. A very fine collection of Chinese plants was contributed by Dr. A. Henry and another fine collection of specimens from the Malay Peninsula and Borneo was forwarded by the Director of the Botanical Gardens, Singapore. From India, valuable contributions were made by Dr. A. G. Bourne, Madras; Mr. T. F. Bourdillon, Travancore; Mr. G. M. Woodrow, Poona; Captain C. J. Milne, Ali Masjid; Mr. Duthie, Director of the Botanical Department, Northern India; and Mr. J. S. Gamble, Director of the Imperial Forest School, Dehra Dun. Mr. R. Pantling contributed to the Herbarium a large collection of Sikkim orchids, and a very valuable collection of mosses from Coorg was obtained from Dr. T. L. Walker, of the Geological Survey. Interesting collections were made by native collectors in Assam, Burma, the Andamans and the Nicobars; while collections were also made during the year in Western Bengal by Lieutenant Gage, and in the Andamans and the Nilgiris by Major PRAIN. The number of named specimens distributed to other Herbaria was 7,185.

4. The decrease in the number of plants distributed is due to the large demand of two years ago for rhea plants having now been satisfied, and the satisfactory increase in the number of seeds distributed is due to the fact that it has lately become possible to obtain collections from Sikkim of seeds of Alpine species which were till recently unobtainable.

5. The Lloyd Botanic Garden at Darjeeling, which was in charge of Mr. W. A. Kennedy, suffered greatly from the heavy snowfall which took place in the latter part of January 1899. Considerable damage was done to many of the exotic trees, but the actual deaths were fortunately very few. A portion of the ground which was formerly known as the Municipal vegetable garden, was transferred to the Eden Sanitarium, and has been included in the grounds of the Lloyd Botanic Garden.

6. The thanks of the Lieutenant-Governor are due to Major PRAIN for the constant and zealous care he has given to the Gardens.

By order of the Lieutenant-Governor of Bengal,

E. W. COLLIN,

*Offg. Secy. to the Govt. of Bengal.*

#### ANNUAL REPORT OF THE ROYAL BOTANIC GARDEN, CALCUTTA, FOR THE YEAR 1898-99.

No. 20G., dated Royal Botanic Garden, Sibpur, the 25th May 1899.

From—MAJOR D. PRAIN, M.E., F.R.S.E., F.L.S., I.M.S., Superintendent, Royal Botanic Garden, Calcutta.

To—The Secretary to the Government of Bengal, Financial Department

I HAVE the honour to submit herewith the 112th Annual Report of the Royal Botanic Garden, Calcutta, for the year 1898-99.

ANNUAL REPORT OF THE ROYAL BOTANIC GARDEN, CALCUTTA, FOR THE  
YEAR 1898-99.

The weather of the past year has been more nearly normal than that of the two preceding seasons, and the bad effects of scanty rainfall detailed in three successive reports do not on this occasion have to be recorded. The show of orchids this season regained its old standard of excellence, although the actual number of plants in the conservatories was considerably smaller than in years gone by. This was due to the reduction in the stock of plants caused by the unfavourable weather of several successive seasons of drought. At the same time, it is becoming year by year more difficult to replace by fresh collections those plants that succumb, owing to the reckless way in which the forests of Sikkim, Assam and Burma have been denuded of their orchids by unintelligent collectors, and it is found that a depleted stock is now only to be made up with great difficulty and at a considerable outlay. The chief improvements effected during the year consisted of rather extensive repairs to the river-bank from the pumping-engine station westwards. Towards the end of the year the Roxburgh Avenue, which was urgently in need of thorough repair, was taken in hand, and it was found possible before the close of the official year to practically complete the necessary earthwork. The want of the requisite funds made it impossible to metal the road within the year under review; this will be done during the ensuing rainy season.

2. *Economic plants.*—Especial attention was as usual given to plants of economic importance, numbers of rhea, rubber and other useful plants being freely distributed. In connection with the question of rubber and gutta-percha samples of the milky juice of species of *Siaeroxylon* belonging to the natural family *Sapotaceae* were sent for examination to Professor Dunstan of the Imperial Institute, London. It is possible that, though these species do not yield a true rubber, the material obtained from them, which more closely resembles gutta-percha than India-rubber, may prove capable of being utilized for various purposes for which it is at present necessary to employ gutta-percha or India rubber. An interesting introduction to India during the year was *Polygala butyracea*, an African species which yields an excellent vegetable oil. For the gift of a supply of its seed thanks are due to Professor E. Heckel of the Colonial Museum, Marseilles, who has made a careful study of the plant and its product. The cultivation and, on their coming into flower and fruit, the identification of living plants yielding Indian products of hitherto doubtful origin, on behalf of the Reporter on Economic Products with the Government of India and on behalf of the Central Indigeneous Drugs Committee, have been continued with good results throughout the year. During the year samples of sugarcane affected by disease were submitted for examination from various parts of the Madras Presidency and from almost every district in the Lower Provinces. The reports on these various samples are in the hands of the officers in charge of the Agricultural Departments of these provinces.

3. *Herbarium.*—The work of this Department was carried on as usual during the year; the number of named specimens distributed to other Herbaria was 7,185. The work of distribution was considerably interfered with, owing to my having to labour single-handed till 20th June 1898, when Lieutenant Gage took over charge of the post and duties of Curator of the Herbarium, and again owing to my absence on deputation from 6th January 1899 till 20th February 1899. The number of specimens contributed reached 10,672, many of the collections received being of special interest and value. From Sir W. Thiselton-Dyer, Director of the Royal Gardens, Kew, the Director, Rijk's Herbarium, Leiden and Heer Buysmann of Middleburg, Holland, interesting general collections were received. A collection of Australian plants was sent by the Government Botanist, Melbourne. Three American collections, from the Eastern and Southern United States respectively and from Mexico, were acquired by purchase, while small collections of North American plants were presented by the United States National Museum, Washington, and by Professor Fowler of Kingston, Ontario. Mr. Medley Wood of Durban, Professor Schinz of Zurich, and Herr Schlechter of Berlin, formerly of Cape Town, presented three interesting sets of South African plants. A very fine collection of Swiss plants was presented by the Director of the Cantonal Museum, Fribourg. The chief Asiatic acqui-



tions were a large and very fine collection of Chinese plants made by Dr. A. Henry, Ssumao, and a smaller one from the same country sent by Captain Pottinger, R. A.; a fine collection of specimens from the Malay Peninsula and Borneo was also forwarded by the Director of the Botanical Gardens, Singapore.

The principal Indian contributions were a large collection of Sikkim orchids received from Mr. R. Pantling in order to complete the authentic sets of Sikkim orchids distributed last year; also a very valuable collection of mosses from Coorg made by Dr. T. L. Walker of the Geological Survey. This latter collection forms the subject of a special report by Dr. V. F. Brotherus of Helsingfors which is now being published in the *Records of the Botanical Survey of India*. Valuable contributions to the Herbarium were also made by Dr. A. G. Bourne and Mr. T. F. Bourdillon from the Pulney Hills and Travancore; by Mr. G. M. Woodrow from Poona; by Captain C. J. Milne from Ali Masjid; by Mr. J. F. Duthie Director of the Botanical Department, Northern India, and Mr. J. S. Gamble, Director of the Imperial Forest School, Dehra Dun, from the N.-W. Himalaya; by Mr. G. A. Gammie, from Sikkim. Interesting collections were made by native collectors in Assam, Burma, the Andamans and the Nicobars; while collections were also made during the year in Western Bengal by Lieutenant Gage, and in the Andamans and the Nilgiris by myself. Thanks are due to J. F. Severin, Esq., of Tingali Bam, who has kindly supervised the work of a native collector in the Jaboka Naga Hills; to Lieutenant Cruddas, s.c., who gave great assistance in the early part of the year to a native collector working in the Kachin Hills, and to E. H. Man, Esq., c.i.e., who kindly directs the work of a native collector in the Andamans and Nicobars. Captain A. R. S. Anderson, i.m.s., of Her Majesty's Indian Marine S.S. *Investigator*, has also kindly helped the Garden, by taking a native collector with him during the time that the *Investigator* was engaged in a survey of the coasts of North Andaman.

4. *Botanical Publications*.—The chief publications of the year have been *Descriptions of Some New Plants from the North-Eastern Frontiers of India*, by Sir G. King and myself, published in the *Journal of the Asiatic Society of Bengal*; *A Note on the Botany of the Kachin Hills North-East of Myittha*, by Captain Pottinger, R.A., and myself, published in the *Records of the Botanical Survey of India*; *On three new genera from the Kachin Hills*, by myself, published in *Scientific Memoirs by Medical Officers of the Army of India*, and *An account of Corydalis Persica*, by myself, published in the *Bulletin de l'herbier Boissier*.

5. *Library*.—The usual periodicals were added, and a number of books obtained, partly by purchase, partly in exchange for the *Annals of the Garden*. The library is steadily increasing in size, and it will be necessary to add considerably to the number of cabinets in which the books are placed.

6. *Interchange of plants and seeds*.—The details of the receipts and issues of plants and seeds during the year are fully given in Appendices I—IV. The further fall in the number of plants distributed as compared with 1897-98 (31,867 in place of 36,885) is due to the same cause as the fall noticed last year—a smaller demand for plants of rhea; less because of the renewed interest in this plant, which was noted in the report for 1896-97, having again died out, than because those who wish to grow the crop are now provided with a sufficiency of plants.

The number of packets of seeds received during the year was 1,161, practically the same as last year. The number distributed was, however, considerably increased (5,794 in place of 2,177). This satisfactory result is largely due to its having become possible to induce native collectors to again visit the higher valleys of independent Sikkim in search of seeds of Alpine species, which are highly valued in Europe and America, but which it has been impossible to obtain since the time of the Sikkim Expedition.

7. *Lloyd Botanic Garden*.—The proposal to transfer a portion of the ground formerly known as the municipal vegetable garden to the Eden Sanitarium, mentioned in the last annual report, has been carried into effect, and the amended boundary line between this patch and the Eden Sanitarium grounds has been duly indicated by boundary pillars. Fencing for the patch has been provided and to a large extent erected, and the laying out of the ground, so as to bring it into conformity with the Lloyd Garden



proper, is being actively proceeded with. The heavy snowfall which took place in the latter part of January 1899 did a considerable amount of damage to many of the exotic trees, their branches being broken by the weight of the snow. Fortunately, however, there are fewer actual deaths to record, as the result of the bitter weather, than might have been anticipated.

8. The budget allotments of money both for the Royal Botanic Garden and for the Lloyd Botanic Garden have been fully spent. The proceeds of sales of surplus plants and books, amounting to Rs. 805-10-6 for the Calcutta Garden and to Rs. 954-2 for the Lloyd Garden, were as usual paid into the Howrah and the Darjeeling treasuries respectively.

9. The post of Curator of the Herbarium, which was vacant at the commencement of the official year, was filled on 20th June by Lieutenant A. T. Gage, I.M.S., who on that date took over charge. Mr. Gage is an enthusiastic botanist, who has been excellently trained and has discharged the duties of his post efficiently. Mr. H. J. Davies, Assistant Curator of the Royal Botanic Garden, who was acting as Curator of the Garden at the commencement of the year was transferred to Allahabad on 6th August 1898, and his place as Acting Curator was taken by Mr. A. C. Hartless, third assistant, Government Cinchona Plantation, from that date till 9th November 1898, when Mr. G. T. Lane, who had been on furlough to Europe for eight months, resumed charge of the post. On the transfer of Mr. Davies to the North-West Provinces the vacant post of Assistant Curator was filled by the appointment thereto of Mr. G. H. Cave, fourth assistant, Government Cinchona Plantation. This transfer called for the immediate posting of the new probationer gardener, Mr. O. T. Hemsley, who reported his arrival on 13th October 1898 to the Government Cinchona Plantation as fourth assistant and necessitated the engagement of another probationer gardener in his place. The new probationer gardener, Mr. A. E. P. Griessen, reported his arrival on 11th January 1899. Besides Mr. Lane, who was, as above indicated, absent on furlough from the commencement of the official year till 9th November 1898, Mr. Cave availed himself of privilege leave from 10th March 1899 till 23rd March 1899, and I was myself absent on deputation from 6th January till 20th February. Mr. W. A. Kennedy has been in charge of the Lloyd Botanic Garden throughout the year. The office of the Botanic Garden has been under the charge of Babu G. C. Dutta.

10. The usual tabular statements (six in number) are appended.

# RESOLUTION ON THE BUDGET ESTIMATES OF THE COMMISSIONERS OF THE PORT OF CALCUTTA FOR THE YEAR 1899-1900.

No. 1042 Marine.

GOVERNMENT OF BENGAL, MARINE DEPARTMENT.

*Dated Calcutta, the 3rd June 1899.*

## RESOLUTION.

READ—

Letter No. 3025, dated the 23th March 1899, from the Vice-Chairman of the Commissioners of the Port of Calcutta, submitting, for sanction, the budget estimates of the Commissioners for the year 1899-1900.

SINCE last year the Commissioners are including in their estimates the receipts and charges on Capital Account in addition to the usual provisions in connection with Revenue Account.

## REVENUE ACCOUNT.

2. A general summary of the estimates submitted by the Commissioners is subjoined.

RECEIPTS.					Estimate for 1899-1900.	Estimate for 1898-99.
1					2	3
					Rs.	Rs.
Part	I.—Jetties	...	...	...	16,04,750	16,39,750
"	II.—Inland Vessels Wharves	...	...	...	5,11,000	5,16,000
"	III.—Strand Bank lands	...	...	...	1,66,994	1,66,994
"	IV.—Port or Harbour Master's Department	...	...	...	5,76,700	5,13,700
"	VI.—Railway	...	...	...	4,20,000	4,00,000
"	VII.—Port Approaches	...	...	...	4,92,875	4,51,125
	Total	...	...	...	37,72,319	36,87,569
Part VIII.—Kidderpore Docks	...	...	...	...	18,71,500	13,31,500
	Total	...	...	...	56,43,819	50,19,069
Special Toll	...	...	...	...	9,00,000	10,00,000
	GRAND TOTAL	...	...	...	65,43,819	60,19,069
EXPENDITURE.						
Part	I.—Jetties	...	...	...	12,65,941	11,71,481
"	II.—Inland Vessels Wharves	...	...	...	4,79,614	4,39,728
"	III.—Strand Bank lands	...	...	...	1,15,931	1,36,214
"	IV.—Port or Harbour Master's Department	...	...	...	6,96,398	6,77,753
"	VI.—Railway	...	...	...	3,80,216	3,78,065
"	VII.—Port Approaches	...	...	...	5,72,324	5,64,314
	Total	...	...	...	35,10,424	33,62,555
Part VIII.—Kidderpore Docks	...	...	...	...	29,11,232	26,59,941
	Total	...	...	...	64,21,656	60,22,496
Special Toll	...	...	...	...	21,263	20,907
	Total	...	...	...	64,42,919	60,43,403
Pensions and Compassionate Allowances	...	...	...	...	50,000	50,000
	GRAND TOTAL	...	...	...	64,92,919	60,93,403

	Rs.
Estimated balance on 1st April 1899	... 7,41,591
Add—Estimated receipts as above	... 65,43,819
	<hr/> 72,85,410
Deduct—Estimated expenditure as above	... 64,92,919
	<hr/> 7,92,491
Estimated probable balance on 31st March 1900	<hr/> <hr/> 7,92,491

#### RECEIPTS.

2. *Part I.—Jetties.*—The receipts are estimated at Rs. 35,000 less than those of 1898-99. The decrease is based on actuals.
3. *Part II.—Inland Vessels Wharves.*—The receipts are taken at Rs. 5,000 less than those of last year's estimate. The decrease is based on actuals.
4. *Part III.—Strand Bank Lands.*—The earnings are estimated at Rs. 1,66,994, the same as last year's.
5. *Part IV.—Port or Harbour Master's Department.*—The receipts are estimated at Rs. 63,000 more than those of the previous year. The increase is mainly under the heads "Receipts from mooring hire" and "Receipts from Harbour Master's earnings," and is based on the actuals of last year.
6. *Part V.—Railway.*—The earnings are estimated at Rs. 20,000 more than those of the previous year. The increase is under the head "Shalimar Branch Line," and is based on actuals.
7. *Part VII.—Port Approaches.*—The receipts are estimated at Rs. 41,750 more than those of the previous year. The increase is based on actuals.
8. *Part VIII.—Kidderpore Docks.*—The receipts are estimated as follows:—

	Rs.
Receipts from graving dock	... 1,50,000
Landing charges on imports	... 60,000
Shipping charges on exports	... 16,30,000
Rent and miscellaneous	... 30,000
Proportion of receipts for towing vessels by hopper barges	... 1,500
Total	<hr/> ... 18,71,500

There is an increase of Rs. 6,30,000 based on the shipping charges on exports, and a decrease of Rs. 1,00,000 on the landing charges on imports. There is a net increase of Rs. 5,40,000. This is due to the closure of the jetties to exports.

9. *Special Tolls.*—The receipts for the nine months from April to December 1898 amounted to Rs. 6,68,144, and it was anticipated that those for the next three months would be one-third of this amount, viz. Rs. 2,22,715. This gives a total of Rs. 8,90,859 for the whole year. The estimate for 1899-1900 has consequently been taken at Rs. 9,00,000.

#### EXPENDITURE.

10. *Part I.—Jetties.*—The estimated expenditure amounts to Rs. 12,65,941 against Rs. 11,71,481 of the previous year. The increase is mainly under the head "Working Expenses," and is based on actuals.

11. *Part II.—Inland Vessels Wharves.*—Under this head there is an increase of Rs. 39,886 as compared with the estimate of last year. The principal increase is under the head "Renewals and improvements." A provision of Rs. 5,800 has been made for pitching the river bank at Bagbazar and Bocooltollah; of Rs. 1,700 for metalling a new road at Chitpur; of Rs. 12,500 for constructing a pontoon for the police stage at Ahiritollah; and of Rs. 11,500 for filling a tank at Chaulgollah.

12. *Part III.—Strand Bank Lands.*—There is a decrease of Rs. 20,283 under this head as compared with last year's estimate. The principal decreases are under the heads "Repairs" and "Renewals and improvements."

13. *Part IV.—Harbour Master's Department.*—Under this head there is an increase of Rs. 18,645 as compared with the estimate of last year. "Repairs to boats, vessels, &c.," shows an increase of Rs. 5,000, due mainly



to provision having been made for repairing the tugs *Hetty* and *Rescue*. Under "Salaries" there is an increase of Rs. 4,864, due principally to a provision for increased establishment for the *Rescue*, which has been rendered necessary in consequence of the increased work which the vessel has now to perform. Under "Establishment, repairs, &c., for Moyapore magazine," an additional sum of Rs. 4,500 has been entered to meet the cost of extensive repairs to be done to the Moyapore magazine.

14. *Part VI.—Railway.*—Under this head there is an increase of Rs. 7,151. "Proportion of interest and Sinking Fund on loans" shows an increase of Rs. 2,342 on account of the necessary provision for interest and Sinking Fund on the debenture loans to be raised during the year under review. Under "Proportion of salaries of Traffic Department" there is an increase of Rs. 1,326, due to the strengthening of the establishment with a view to cope with increased work. Under "Working expenses" there is an increase of Rs. 5,000 due to the necessary provision for the renewal of a large number of sleepers.

15. *Part VII.—Port Approaches.*—There is an increase of Rs. 8,010 due mainly to increased provisions having been considered necessary under heads, "Salaries of officers and crew" and "Working expenses."

16. *Part VIII.—Kidderpore Docks.*—The expenditure is estimated at Rs. 29,11,232 against Rs. 26,59,941 of last year. "Proportion of interest and Sinking Fund on Loans" shows an increase of Rs. 90,134 for the reason stated in paragraph 14. There is an increase of Rs. 1,14,335 in the "Salaries of Traffic Establishment" on account of increased provision having to be made for additional establishment. Under "Working expenses" there is an increase of Rs. 1,07,949 on account of the necessary arrangements made for coping with the increased work at the Docks.

#### CAPITAL ACCOUNT.

17. As stated in the opening paragraph, the estimates now before the Government take into account the receipts and charges under Capital. The receipts are estimated at Rs. 50,00,000, made up as follows:—

	Ra.	Total. Ra.
Contributions from Revenue	1,20,110	
Stock charged to works	5,00,000	
	<u>6,20,110</u>	6,20,110
Sale of land at Shalimar for the use of the Bengal-Nagpur Railway	10,10,500	
Less amount received during 1898-99	5,00,000	
	<u>5,10,500</u>	5,10,500
Debenture loan	13,37,160	
Ditto or advanced by the Government	25,32,230	
	<u>38,69,390</u>	38,69,390
		<u>50,00,000</u>

18. In the estimate of expenditure the following works are stated to be "sanctioned and in progress," but which have not yet been formally approved by the Government:—

Works.	Estimated cost. Ra.
(1) Sidings, bunker coal depôt	66,800
(2) New boat entrance at Docks	1,21,157
(3) One additional salt gola to hold 12,000 tons, with boat wharves, stages, cranes and sidings	1,30,000
(4) Sheds at Docks for wheat, seed and tea consigned to the Docks without shipping order	2,75,960
(5) Improvement to Port Trust Railway	2,46,883
(6) Shalimar coal yard	11,50,000

The sanction of the Lieutenant-Governor to the first three items has been communicated in this Department's No. 65T.—Marine, dated 26th May 1899. The estimates for the remaining works are now before the Government of India, and the sanction of that Government will be communicated when received. Pending the sanction of that Government, it would be more correct to enter these works under the list of "proposed" works.

19. Subject to the above remarks, the Lieutenant-Governor, in pursuance of the powers vested in him by section 71 of Act III of 1890, approves of the estimate of income and expenditure of the Commissioners for the year 1899-1900.

By order of the Lieutenant-Governor of Bengal,

A. D. McARTHUR, *Colonel, R.E.*,

*Secy. to the Govt. of Bengal.*

## SYSTEM OF VERNACULAR EDUCATION IN BENGAL.

## GENERAL DEPARTMENT—EDUCATION.

*Darjeeling, the 1st July 1899.*

## RESOLUTION—No. 1931.

## READ—

- Proceedings of the Agricultural Conference held in the Department of Revenue and Agriculture at Simla on the 2nd, 3rd, 4th, 5th, 6th, and 7th October 1893.  
 Government of India's Resolution No.  $\frac{15}{931}$ , dated Simla, the 7th September 1895.  
 Government of India's Resolution No.  $\frac{19}{98-1}$  of 20th September 1895.  
 Proceedings of an Agricultural Conference held in Calcutta on the 2nd, 3rd, and 6th January and 10th and 11th February 1896.  
 Government Order No. 692T.—R. of 30th June 1896, to the Director of Public Instruction, Bengal.  
 Government of India's Resolution No.  $\frac{3}{98-1}$ , dated the 20th March 1897.  
 Letter No. 4630, dated the 18th August 1897, from the Director of Public Instruction, Bengal.  
 Government Order No. 2679, dated 12th August 1898.  
 The Report of the Committee appointed to revise the subjects and text-books used in vernacular education in Bengal, received with the Director of Public Instruction's letter No. 2713, dated the 6th April 1899.

## Read also—

- A short report on the system of vernacular education in the Central Provinces by Alexander Pedler, Esq., F.R.S., received with the Director of Public Instruction's letter No. 477, dated 16th January 1899.  
 The final report of the Commission on Manual and Practical Instruction in Primary Schools under the Board of National Education in Ireland, dated the 25th of June 1898.

The question of remodelling the lines on which vernacular education in the Indian Empire has hitherto been based, has for a considerable time been exercising the most anxious consideration of both the Imperial and Local Governments, and it was more particularly in its relation to agriculture that this question engaged the attention of the fifth meeting of the Agricultural Conference held in the Department of Revenue and Agriculture at Simla on the 6th of October 1893. After considering the recommendations made by Dr. Voelcker in paragraphs 527 and 528 of his Report on the Improvement of Indian Agriculture, the following Resolutions were passed:—

*Resolution I.*—That in considering the question of agricultural education and progress, the Conference desire to express the opinion that it is most desirable to extend primary education among the agricultural classes.

*Resolution II.*—That, as a general rule, instruction in agriculture should be combined with the existing course of education, and not depend exclusively on separate special institutions.

*Resolution III.*—That it is most desirable that the Universities should recognize the Science of Agriculture as an optional subject in the course for a degree.

*Resolution IX.*—That, in the opinion of the Conference, education in the lower schools should be of such a practical character as to fit the pupils for technical pursuits including agriculture, as well as for literary and commercial pursuits.

*Resolution X.*—That the text-books used in schools should be written in the simplest language ordinarily understood by the people, and should be descriptive of subjects with which they are familiar; also that the use of pictorial lesson charts, illustrating familiar objects, should be encouraged.

*Resolution XI.*—That the system of training in normal schools should be adapted to qualify school teachers to give instruction of the character indicated in Resolution VIII.

*Resolution XII.*—That in each Province a Committee, in which agricultural officers should be included, should be convened at an early date for the consideration of the questions raised in the preceding resolutions.

The Governor-General in Council, after considering the recommendations of the Conference, and after correspondence with the Secretary of State,



determined, before enunciating finally the principles or policy to be adopted, to give Local Governments the opportunity of fully examining the various subjects dealt with by the Conference, and with a view to affording them every facility in their investigation, deputed Sir Edward Buck to attend a series of Provincial Conferences and explain the various issues under discussion and the different methods proposed or adopted in other provinces. It was explained that the Government of India believed that "greater success was to be expected from making instruction in the rudiments of agriculture part and parcel of the primary system of instruction in the country than from teaching it as a subject apart from the general educational programme, and that such general enlightenment and intellectual expansion of the agricultural classes, as would enable them to perceive for themselves the small reforms which are within their means and opportunities would be more likely to produce substantial results than special instruction in particular agricultural processes." It followed therefore that the educational question which was given to each Province to answer was not merely how to adapt education to the training of agriculturists, but how the plan of instruction should be so fashioned as to promote in the pupils taught the power of assimilating easily any kind of technical instruction.

2. This phase of the question was discussed at the meeting of the Bengal Provincial Conference held on the 6th of January 1896, and it was suggested that the course of science in primary and middle schools should be reconsidered and so graduated as to include at different stages branches of the elements of agriculture, care being taken to exclude words and ideas of which the pupils could have no understanding. Effect was to be given to this resolution by arranging for the introduction of a compulsory course of Elementary, Physical and Natural Science, including Zoology, illustrated as far as practicable by object-lessons, and the Director of Public Instruction was asked to report how he proposed to give effect to these suggestions. This he did in August 1897, and in March 1898 an impetus to the establishment of Agricultural education was given by the opening of the Agricultural classes at the Sibpur Engineering College. This was, however, only a scheme for a "Higher Agricultural Education" and still left the pupils of the vernacular schools unprovided for; and in August 1898 the Lieutenant-Governor called for proposals of a wider nature with a view to the introduction of a system of vernacular education designed more to develop the minds of the boys than to practice and strengthen their memories; and after indicating the points for

Mr. Alex. Pedler	...	President.
Mr. E. B. Havell	...	
Babu Radhika Prasanna Mukherji	...	
Dr. J. C. Bose	...	
" P. C. Ray	...	Members.
Mr. N. G. Mukherji	...	
Babu Barada Prasad Ghosh	...	
" Basamay Mitra	...	

consideration, referred the matter for careful discussion and report to a small Committee of Educational experts whose names are given in the margin. Their report—a record of singularly careful and thorough research—has now been received, and in it the Committee have shown how it is possible to adapt the principles accepted by the experience of Europe to the conditions of Indian vernacular education.

The changes recommended are changes which are of the most vital importance to the interests of education in Bengal, and before taking any action on the proposals made by the Committee, the Lieutenant-Governor considers it to be advisable to publish their report for general information, and invites any who may desire to do so to submit to Government on or before the 1st of October 1899, any criticisms he has to make on the proposals now before Government.

The view that the general principles on which the Committee base their recommendations to Government are such as will stimulate the intelligence of the scholars and lead to the material progress of the people of this Province, finds support from the success which has attended the introduction of modern methods and subjects of education in the Central Provinces. It would appear from Mr. Pedler's report that the first beginning was made in 1880, and though the progress made has been gradual, Drill, Drawing, Agricultural teaching, Physical science, Kindergarten, and Object-lesson teaching are all now recognised.

features of the education given in vernacular schools in the Central Provinces. The increased interest with which the pupils accept the training provided for them has been manifest, and the result has been most beneficial both in the higher development of the intelligence of the pupils and in their discipline in school. Manual training was also introduced, and before it was omitted from the course of instruction (for reasons which Mr. Pedler believes to have been somewhat prematurely accepted), it had been sufficiently clearly demonstrated that its introduction in vernacular schools was not only possible, but suitable. Such statistics as are available on the subject go to corroborate the conclusion drawn by the Director from the numerous careful enquiries he made that the modern system can be introduced at no increase of cost to the State, and it is not an unsatisfactory feature of the Committee's proposals that the books the scholars would have to buy are cheaper than those of the present curriculum.

\* Lord Belmore, *Chairman*.  
The Right Hon. the Archbishop of Dublin.  
Christopher Pallas, LL.D.  
The Right Hon. C. T. Redington.  
His Honour Judge Shaw.  
The Right Rev. Monsignor Molloy.  
The Rev. Henry Evans.  
The Rev. H. B. Wilson.  
Professor Geo. F. Fitzgerald.  
Stanley Harrington, Esq.  
William Robert J. Molloy, Esq.  
Captain T. B. Shaw.  
J. Struthers, Esq.

Since the report of the Committee was received, the Lieutenant-Governor has had brought to his notice the Final Report of the Commissioners\* appointed to consider Manual and Practical Instruction in Primary Schools under the Board of National Education in Ireland. Part I of this work, which represents the continuous labour of two years and is based upon the evidence of the leading authorities in Great Britain, Sweden, Denmark, Germany, France, Switzerland, and Hol-

land, is printed as an Appendix to this Resolution; and there could scarcely be a higher tribute to the thoroughness and ability which the Bengal Committee have brought to bear on the work entrusted to their charge than the close correspondence between their conclusions and those of the Irish Commission.

#### REPORT OF THE COMMITTEE APPOINTED TO REVISE THE SUBJECTS AND TEXT-BOOKS USED IN VERNACULAR EDUCATION IN BENGAL.

In obedience to the orders contained in the Government of Bengal's letter "Agriculture, No. 2679, dated Calcutta, 12th August 1898, from M. Finucane, Esq., C.S.I., Secretary in the General Department, to A. Pedler, Esq., F.R.S., Officiating Director of Public Instruction, Bengal," the members of the Committee therein named have the honour to submit the following report:—

The Committee consider that the orders in the Government letter have required them to submit proposals for remodelling practically the whole scheme of vernacular education in Bengal, especially with regard to the subjects which are taught in various classes of vernacular schools, and the manner in which instruction is given.

It is, indeed, pointed out in paragraph 6 of that letter that the introduction of the study of such branches as Agriculture, Natural History, Sanitation, and Physics as compulsory subjects into vernacular schools, which is one of the principal orders in the letter, will itself involve the question of the methods by which such instruction should be given. It is also an instruction to the Committee (paragraph 5) that the aim in making alterations in the present system of education should be "more to develop the minds of the boys than to strengthen their memories. The object in view is the training of the powers of observation, and the development of the powers of hand and eye." And again in paragraph 6 it is stated: "The Lieutenant-Governor is further of opinion that elementary drawing should form a subject of instruction in all primary schools."

The Committee have, therefore, in their proposals made suggestions for revising on modern lines the General curriculum of the vernacular schools of all grades from the infant stage up to and including the middle vernacular stage.

2. Working on the principle that the development of the educational structure is very considerably dependent on the nature of its foundations, the Committee first earnestly considered whether the instruction

which is now given in lower primary schools is of the type which is desired, and whether such education is not easily capable of being improved. The first stage of the present instruction in a *patsala* is for the children to be made to sit as still as they can, anything like activity being sternly repressed, while they have to repeat hour after hour ordinary multiplication and other tables for the purpose of committing them to memory. A more unnatural method of commencing the training of a child can hardly be imagined. Speaking generally, the lowest class of a lower primary school now works for about seven hours a day, of which one hour is given to learning the letters of the alphabet, etc., and one hour to

instruction in writing, while the remaining hours (5 hours a day) are devoted entirely to the repetition of arithmetical tables and the revision of old lessons. In the next higher class the length of time devoted to reading and writing remains the same, but rather less time is devoted to repetition of tables and revision of old lessons, while European and Native Arithmetic and Mensuration (after the Native system) are here commenced. In the next higher, or the lower primary class most of the subjects remain as before, except that the repetition of multiplication-tables is dropped, while the reading of manuscript and a little Sanitation are taught.

3. Looking at this programme of work it can be seen how little the present system of education conforms to the principles formulated in the Government letter, which lays down in precise terms that the education required is intended "more to develop the minds of the boys than to strengthen their memories, and to train the powers of observation and develop the power of the hand and eye."

Hence it is clear that the orders of Government can only be carried out by making a drastic change in both methods and subjects, even from the very lowest or the infant stage of education.

\* Report of the Committee of Council on Education for England and Wales, 1897-98, page 690.

4. The two leading principles which appear to be accepted in Europe as a sound basis for the education of early childhood are as follows\*:-

- (1) The recognition of the child's spontaneous activity, and the stimulation of this activity in certain well-defined directions by the teachers.
- (2) The harmonious and complete development of the whole of the child's faculties. The teachers should pay special regard to the love of movement which can alone secure healthy physical conditions, to the observant use of the organs of sense, specially those of sight and touch, and to that eager desire of questioning which intelligent children exhibit. All these should be encouraged, under due limitations, and should be developed simultaneously, so that each stage of development may be complete in itself.

5. The principles which are here enunciated can, in the opinion of the Committee, only be fulfilled by the introduction of the methods originally put forward by Froebel, which are now known under the name of Kindergarten-training. The principles which underlie this system are well-known. By Kindergarten children are trained and not taught, in the ordinary acceptation of the word. They are trained so as to arouse a desire to *be* something, to *do* something, and to *know* something. The children are encouraged to feel that each one possesses a certain amount of innate power and capacity, the gradual development of which depends on the individual's own activity. They are led to see that eyes, ears, and hands all help in the acquiring of knowledge, and these are the channels through which all *first* knowledge is acquired. The teaching also develops all the sides of a child's nature. The games, marching and singing, of the Kindergarten system secure the healthy physical exercise and development so necessary to a growing child. The stories told to the children and the nature-teaching are so arranged as to develop the moral side of the child, and the habits which are formed of attention, of accurate observation and of thought, and the power to express thought concretely in form and in language, are most valuable intellectual and mental training. Another principle in Kindergarten-training is the recognition of the desire of almost every child to work, invent, or originate on its own account, and hence stress is always laid on the teaching of such subjects as drawing, modelling in clay, etc., which gives scope for such desires.

It is of course true that Kindergarten-training may be made an expensive and elaborate kind of education, but it is submitted that there is nothing in the above principles which necessitates any real expense, and that if the form of Kindergarten adopted is made suitable to the circumstances and local conditions of the pupils, little or no expenditure will be necessary. In India primary schools work at an expenditure of about a rupee per pupil per annum, and hence expensive or even moderately-priced gifts of Froebel cannot be provided in the primary schools of Bengal. The principles above enunciated must therefore be worked out on more or less new lines, and only the use of objects now found in almost every primary school will be necessary to carry out such teaching in the proposals made by the Committee.

6. Closely allied with the methods of Kindergarten-teaching is the so-called object-lesson teaching; indeed, the latter may almost be called a part of or possibly an extension of the former, as it is dependent on the same principles.

\* Object-lessons cannot be dispensed with in teaching, if habits of observation are to be duly fostered, and they should always be treated as a means for mental exercise and not merely as a method of imparting miscellaneous and even valuable information. To fulfil this purpose, however, objects must always be present and in sufficient numbers, and the chief aim should be to call into activity observation and the construction of clear mental pictures, so that the intelligence of pupils may be exercised and developed.

\* See Circular No. 332, page 632 of the English Education Department for 1897-98.



7. The principle of teaching by object-lessons appears capable of far greater extension than is frequently considered to be the case. Usually object-lessons are confined to the exhibition of a few natural substances, such as minerals, plants, etc., or to the pictures of a few animals, but the method can easily be extended. Thus, if a Geography lesson is taught by visible illustrations, and by actual modelling in sand and clay for the production of miniature rivers, hills, plains, mountains, etc., it really becomes an object-lesson. Tales from History, if graphically told and well illustrated by striking pictures, are almost equally object-lessons, while the facts of elementary science obviously form excellent subjects from this point of view.

8. In order to carry out the principles laid down in the Government letter, which are those fully accepted by modern educationists, the Committee propose that the first years of a child's school-life should be devoted almost entirely to training the senses and the powers of observation. To effect this the Committee wish to introduce Kindergarten methods at the very commencement of education. These methods will be supplemented by object-lessons and drawing, with possibly a certain amount of action-songs in the infant stages. Having commenced the development of the senses and powers of observation in the lowest stage, it is then proposed to strengthen and develop the memory and reasoning powers, and to continue the training of the hand and eye, etc. It was also considered that training on Kindergarten principles should extend throughout the whole of the infant stage of education, that is, during the period when children are from about 5 to 7 years old. The Committee are of opinion that object-lessons should be a prominent part of the teaching of all classes up to and including the lower primary stage, and that the various subjects taught up to the upper primary stage should be treated as far as possible as object-lessons.

In the middle standard of education the necessity of teaching by the object-lesson method is perhaps not quite so pronounced, as proper habits of working will probably have been well established by the instruction up to the upper primary stage.

The training of the hand and eye by such work as Drawing has been considered to be essential throughout all stages of vernacular education, and in the case of the education of boys the Committee think this teaching should be supplemented at about the age of 8 by a little manual work in the form of leaf-manipulation, etc. In the case of girls this subject would be replaced by needlework. At ages above this the Committee consider the manual training should be broadened and extended up to certainly the middle vernacular standard.

9. The Committee have carefully examined the list of elementary sciences which the Government have proposed to introduce into the curriculum of the schools, and they have accepted as feasible the Government proposals almost as they stand. They wish it, however, to be very distinctly understood that there is no intention of teaching or attempting to teach such subjects as Chemistry, Physics, Natural History, etc., as sciences to the children who attend the vernacular schools, but they wish to point out and make it quite clear that all that can be done is to present in a homely way some of the simpler and more important facts and truths of such sciences. These facts must be suited to the intelligence of children and taught in a more or less practical way, so that the facts may be assimilated and give food for observation, thought, and inference, and thus be a help to the children in their everyday lives later on. Really it would be more correct to designate the facts which are intended to be taught under the headings of Chemistry, Physics, Natural History, etc., as the "*Science of everyday life.*"

10. The Committee have also considered that if children are made, while at school, to work solely at their books or studies, only one part of what may be called a complete education is given. They believe that a true system of education should try to develop not only the powers of observation, the mental faculties, and the power of the hand and eye, but that no system can be called complete unless at the same time the physical powers are fostered and strengthened to the utmost possible extent.

It is specially the case with young children that, if they are kept for any length of time consecutively at book-work, they become listless and tired, and make little real progress. On the other hand, if book-lessons are alternated with lessons which require action and movement, then the children return to their books with renewed interest and vigour. For this reason the Committee consider it to be essential to introduce action-songs into the infant stage of teaching, elementary drill into the next higher stages, and drill and gymnastics for boys, or drill and calisthenics for girls into the remaining stages of vernacular education.

In the Central Provinces, for instance, an extremely complete system of drill and gymnastics has been introduced into the vernacular schools, and has been in force for several years. The pupils take very great interest in such exercises and they become most expert. They are smartly obedient to short words of command, and exhibit not only great skill in the exercises, but the excellent discipline which is now shown in these schools both in and out of class is an eloquent testimony to the mental discipline which a good system of drill enforces.

11. There appears to the Committee to be no necessity for them to defend in detail the introduction of any of the above subjects into vernacular education in Bengal. In

the case of Kindergarten-training, object-lesson teaching, drawing (hand and eye-training), needlework for girls, manual work, and drill, they are fully convinced of the necessity for their study, and they consider that there are no insuperable difficulties in the way of their introduction. The success which has attended the systems of education in Europe since the introduction of these subjects is in itself sufficient to prove their suitability. In the case of the science subjects, or what may be called the "Science of everyday life," it is proposed to introduce the facts required into the ordinary class readers, and hence these can scarcely be said to be new subjects, but rather an attempt to direct the reading work of the pupils to subjects which are of interest and importance to them in their everyday lives, instead of requiring them to read books which rarely contain any useful information, and are frequently of a very uninteresting nature.

12. As appendices to this report (Appendices A and B) two syllabuses are given. The first is the detailed statement of the subjects and the extent to which it is proposed to teach them in all the classes of the vernacular schools, while the second syllabus gives a condensed view of the detailed syllabus.

The detailed scheme as recommended by the Committee. It will be convenient to note here some of the leading points of the syllabus. Free-hand drawing is introduced at the earliest stage and runs through the whole course. Manual training for boys, in the form of leaf-manipulation, paper-cutting and folding begins in the A class of the lower primary; as needlework for girls it begins in the third year of the infant class or class B of the lower primary. Drill for boys and girls runs through the whole course. Under the head of Reading, beginning with the A class of the lower primary, there is a list of science subjects which, without the explanation given in the next paragraph and in paragraph 9, may seem to impose too great a burden on the students, but on examination it will resolve itself into a simple reading course arranged as follows:—For boys in town schools, some elementary notions of the simplest facts and principles of Botany, Natural History, Hygiene, Physical Science, and Chemistry. For boys in country schools, a similar course, only with Agriculture substituted for Physical Science and Chemistry. For girls in both town and country a similar course of Botany, Natural History, and Domestic Economy only. The reader itself will be written in the most simple and comprehensible language, devoid of technicalities; and, to minimise the danger of the reading exercise degenerating into learning by rote, the different subjects up to Standard IV are to be illustrated and explained as far as possible by means of object-lessons.

The advantages of a course of Agriculture for village schools in Bengal need not be entered upon. Naturally this subject becomes of a more technical character than the other Science subjects, but at the same time it will be treated in a manner suitable for the age and understanding of schoolboys. In Standards V and VI practical work in a school garden is introduced. The syllabus for Standard IV of the subject "Writing" may be noticed in this connection, as a part of it has indirect reference to Agriculture. It was brought to the notice of the Committee that in very many cases raiyats unwittingly placed themselves in the power of money-lenders through absolute ignorance of the meaning of the documents to which they subscribed. The Committee, therefore, were of opinion, considering that they were providing a course of education mainly for the agricultural classes, that it would not be out of place to introduce as an exercise in Writing the forms of simple documents which are commonly used by raiyats. Mensuration will include a course of simple practical Geometry. In the two highest standards Euclid is introduced as an alternative subject only; in the present course it is compulsory. The subject of moral training will be considered in the selection of pieces for the literature book and in subject IX (Poetry).

13. As it may be objected that several new subjects are proposed to be introduced in the curriculum, it is well to state that the increase of the course is only nominal, for most of the new subjects are only in substitution for others which are now taught.

Thus, for instance, in the lower primary course, there are subjects in the present curriculum which partly or wholly go out in the new proposals.

Taking the case of the B and A standards of a lower primary class, corresponding to the two stages of infant training, the children will be practically relieved of the work in reading and also in learning multiplication-tables by rote. In their place the children will have to take up Kindergarten occupation and object lessons. In the lower primary class the time at present spent in reading and in working at the *Sarir Palan* (Science of Sanitation) will be devoted to studying the new primer for Standard I in what has been called the "Science of everyday life." The same remark which has just been made with reference to the lower primary class will almost hold good for all the classes above it, as it is proposed that the Science Readers which are to be prepared should be substituted for the ordinary reading books now used in the schools.

14. Again, writing is usually taught to the children in all the classes of vernacular schools at least an hour a day; it is proposed that a portion of this time, say, two hours a week, should be devoted to Drawing. Arithmetic, multiplication-tables, etc., are now taught at least 2 to 2½ hours a day, and in some classes for a much longer time. Under the new scheme the tedium of the children's work in the infant stages will be lightened, for the idea of numbers will be introduced during the Kindergarten and object-lesson work, when dealing with the leaves of trees, the fingers of the hand, etc., so that in the two lowest classes the Arithmetic will be more like systematised play than a serious study. It is also thought

that the learning of multiplication-tables should certainly be postponed to the second period or year of study of the infant stage. In the same way it is thought that the children should not learn the letters of the alphabet till the second year of tuition, while they will only commence their full course of reading and writing in the third year of study.

15. Again it may be remarked that in the present upper primary course the following subjects are taught:—Literature, Science, and Grammar, which may be considered to be replaced by the Science Reader. Writing is to be partly replaced in the new scheme by Drawing. The dry facts of History and Geography now taught in the upper primary schools are to be replaced by interesting Historical and Geographical Readers, which will also include stories with a moral tendency. Euclid, now taught in the two classes of the upper primary school will be replaced by Geometrical Drawing, and so on. Practically the only additional subjects in the proposed new courses will be Drill and Manual Training. These lessons must be really looked upon as a relaxation, and it is believed that, as is found to be the case in England, the introduction of these additional subjects will enable the other work of the school to be carried out more efficiently and expeditiously.

Hence it will be seen that the new scheme proposes to relieve the children of a considerable amount of tedious routine work, and to substitute for it lessons which will be at the same time more instructive and more interesting.

16. The statements appended to this report (Appendices E to G) are time-tables giving the number of hours to be spent every week in each of the prescribed subjects in the different standards, for the lower primary, the upper primary, and the middle schools. With a view to diminish the pressure on the pupils at the infant stage, care has been taken to restrict school-work to 18 hours a week for the first stage, 24 hours for the second, and 25 hours for the third stage, while 27 hours have been assigned to both the first and second Standards. From the third to the sixth Standard the number of school hours has been fixed at 30, including four hours for drill and manual work, which, according to the experience gained elsewhere, afford marked relaxation from purely intellectual labour.

17. The Committee consider that though the syllabus of studies now put forward is based mainly on the existing capabilities of schools of different grades, it will be some time before it can be effectively taught in those institutions. They are of opinion that a period of two and-a-half years should be allowed to elapse, from the date of publication of the syllabus, for schools to adapt themselves to their altered requirements, and that the first examination for scholarships under the revised standards should be held in 1902. The Committee do not consider it expedient to recommend the partial introduction of these standards, either in particular localities or in particular grades of schools, at an earlier date, as the present system of scholarships embraces both urban and rural areas, which cannot be educationally severed from one another without the creation of practical difficulties. They therefore venture to recommend that all classes of vernacular schools be given notice at an early date that the examination for scholarships will be held under the new system from the year 1902. This recommendation is made on the assumption that the middle and upper primary examinations will continue to be held before the Durga Puja holidays, and the lower primary examination in November or December as at present.

18. The necessary preliminaries to the introduction of the new scheme will be three. First, the immediate introduction of teaching the new subjects into training-schools, so as to enable them to turn out rapidly teachers qualified to take up school work under the new system. Second, the training of Inspecting Pandits, Sub-Inspectors, and Deputy Inspectors of Schools, who will have to be familiarised with the methods of teaching now proposed to be adopted. They may be invited to see actual work under the syllabus in the training schools for a week or ten days, and with the help of the knowledge thus gained, they can be expected to aid the teachers in introducing the system. Third, the preparation of manuals for the teachers and text-books for the students.

19. Appendix C gives a statement of the books and manuals required under the proposed new scheme. They consist of two Teachers' Manuals, one Drill Book and the Drawing Books for the use of the teachers, and the following text-books to be purchased by students:—

*For the Lower Primary.*

One Reader and one Arithmetic Book.

*For the Upper Primary.*

One Science Primer.

One Historical, Geographical and Moral Reader.

One Arithmetic Book.

*For the Middle Vernacular.*

One Science Primer.

One Literature Book and Moral Reader.

One Historical and Geographical Reader.

One Arithmetic Book.

Euclid (alternative).

20. Referring first to the Manuals for Teachers, the Committee are of opinion that the necessity for them is sufficiently shown by the inefficiency which is to be found in the work of many teachers in primary and other schools in Bengal.

The *gurus* in many primary schools have never seen what good or proper teaching is like, and they have never received any instruction as to the best methods by which such teaching should be given. The Teachers' Manuals, which the Committee consider should be prepared at once, will deal with the work required to be done by a school-master, and indicate the nature of the subjects to be taught and the precise method by which the instruction should be given.

21. The vernacular education which is being dealt with in this report may really be divided into four stages—the Infant stage, the Lower and Upper Primary, and the Middle stages. In the Infant stage practically everything depends upon the teacher. It is therefore necessary to supply each of the lower primary *gurus* with a manual giving very full instructions as to how the teacher should conduct the training of the senses and how he should proceed with object-lessons, etc., which are detailed in the syllabus. This Manual, called the Junior Teachers' Manual, would also indicate more briefly how the remaining subjects up to the lower primary standard (*i.e.*, Standards I and II of the syllabus) are to be taught.

The second Manual for the senior teachers would go rather more fully into the methods of managing the classes of a school, into the methods of maintaining discipline, the methods of keeping school registers and accounts, the requirements as to cleanliness and sanitation in school-rooms and school-houses, and other matters of the same kind, and, in addition, it would explain in detail the principles upon which the teaching of the classes of an upper primary school should be conducted.

A few additional chapters dealing with the new subjects taught in the middle schools, and on a few other matters, would be sufficient to make this second book suitable for the use of teachers in middle schools, as well as for those in upper primary schools.

The subjects which are to be treated in the two Teachers' Manuals are given in detail in Appendix D.

22. The want of drawing examples for Indian schools has been supplied by a series of four books lately prepared under the supervision of the Superintendent of the Calcutta School of Art, by order of the Government of India. To make them more complete some additional examples are now being prepared, and it will only be necessary to arrange for a cheap edition of the whole series to make it suitable for use in primary and other schools in Bengal.

An excellent Drill book, published in Hindi, embodying the native form of gymnastic exercises, has been introduced into the Central Provinces schools with marked success. The Committee consider that the Drill book for schools in Bengal should be framed on similar lines.

23. The scope and method of the text-books required for the students are sufficiently indicated in the detailed syllabus. The number of pages to be allotted to each subject in the different standards and the selling prices of the books are given in Appendix C.

Method of procuring the text-books and manuals required.

24. It remains now to consider the best method of procuring the class of text-books and manuals required.

Two alternatives were considered by the Committee—

1st.—To rely on private enterprise.

2nd.—To depute official or non-official experts to prepare them, on suitable terms as to remuneration and adoption of the books by Government.

After much deliberation the Committee decided that the first course was preferable, as it would disarm much of the opposition and ill-feeling which was sure to be aroused among authors and publishers by the unavoidable interference with their vested interest in existing text-books, involved in the reorganisation of the present curriculum. Any attempt on the part of Government to create a monopoly in the preparation of the new books might easily give rise to a strong agitation against the whole scheme. Another advantage of throwing open to competition the work of preparing all the books required would be to relieve Government of the difficult and somewhat invidious task of nominating experts. It is clear that no single author can be an expert in all the subjects which are dealt with in the Science Primers. It would therefore follow that some one author must act as an editor of a book or series, employing experts to write sections of the work which he would incorporate in a Primer. Hence there would be a further and grave difficulty if it were decided that Government should undertake the preparation of the Science and other Readers.

The Committee therefore considered that the best course to follow would be to notify publicly the manuals and text-books required for the different classes of schools, the subject-matter and lines on which the books are to be drawn up being clearly specified, and to invite authors and publishers to submit works for the approval of a Committee to be hereafter nominated by Government. The books might be written in any vernacular used in Bengal, but a very full type-written summary of the contents in English should be submitted with each book. The authors or publishers, as the case might be, of the works selected would be



allowed to retain the copyright, but they would be required to undertake the printing and publishing on their own account. The maximum selling price is indicated in Appendix O. With regard to the text-books for students and the Teachers' Manuals, the Committee consider that the copyright of works selected, being a property of considerable value, would offer a sufficient inducement for authors and publishers to compete without any honoraria being given, but probably Government would have to give a guarantee that no changes would be made in the books for a certain time, perhaps for five years.

25. The financial effect of the scheme can as yet be estimated only approximately.

Financial effect of the scheme.

The Committee are of opinion that the new standards of education can without difficulty be taught in the schools by the present masters. Hence no additional expenditure will be thrown on public funds from this cause. The Committee do not expect that at the outset the teaching in some of the new subjects will be very satisfactory, but, as suggested in paragraph 18, steps will be taken to gradually raise the standard of teaching. The Committee are convinced that the teaching of the new system cannot possibly be less satisfactory than the teaching at present carried on. With regard to other items of the cost of the new scheme, the Committee have come to the conclusion that the preparation of the text-books for the pupils as well as the two manuals for teachers should be left to private enterprise. If this recommendation be carried out, the cost to Government of the introduction of the scheme will be practically nothing except what is incurred in the publication of the Drawing books and the Drill book. District Boards and other local authorities will have to provide the lower and upper primary schools with copies of the Teachers' Manuals and the Drawing books and the Drill book. The total cost for each lower primary school will thus be about 10 annas, and for each upper primary school about 12 annas. The number of lower primary schools in these provinces being 43,483, and of upper primary schools 4,113, the local authorities will have to incur an expenditure of about Rs. 32,000 for supplying these books to the schools. As most of the lessons suggested in the syllabus deal with common objects, the Committee trust that the articles required will be secured by each school locally without any extra cost. A sum of 4 annas a year may, however, be put down as covering the entire cost of these articles for a lower primary school. In that case about Rs. 12,000 will have to be provided either by the school *gurus* or the villagers. In upper primary schools the annual cost may probably be a rupee, and in middle schools the expenditure may vary with the ability of the school to bear it.

26. It remains to be seen how the changes about to be introduced are likely to affect the students of the different grades of vernacular schools for whose benefit the Committee have endeavoured to revise the entire curriculum of studies. The number of pages of text-books gone through by a candidate for a middle scholarship under existing arrangements is about 1,400, and the cost of the books is about Rs. 6, while under the scheme here set forth the number of pages will be five to six hundred and the cost one rupee to one rupee eight annas. In addition to this, drawing appliances, costing about 8 annas to each pupil and one rupee to the school, will have to be provided. In respect of the Upper Primary scholarship class, the pages at present come up to 1,050 and their cost to about Rs. 2-13, while the new scheme reduces the pages to three hundred or three hundred and fifty, and their cost to eight to twelve annas or to perhaps a rupee, including drawing instruments. In the same way the Lower Primary scholarship class now has to go through 230 pages, the books costing about 10 annas, while the new scheme gives 140 pages, costing 6 annas. These figures give some idea of the relief which would be afforded to students of vernacular schools of different classes in respect of the burden of text-books and their cost to the pupils.

27. The Committee are of opinion that it will be time to discuss the question of assigning different values or marks to the separate subjects for the purposes of the different scholarship examinations when the Government have intimated their decision on the scheme embodied in the present report. The Committee, therefore, consider it premature to make any detailed proposals in respect of marking for the present.

ALEX. PEDLER

... President.

E. B. HAVELL

...

RADHIKA PRASANNA MUKHERJI

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...

Members of the  
Committee.

The 6th April 1899.

## APPENDIX A.

## THE DETAILED SYLLABUS.

**NOTE.**—It is of the utmost importance that all objects which are used to illustrate the courses of instruction in vernacular schools should be selected from materials or things that are commonly found in every school, or which can be obtained in every village without difficulty and without cost. This rule applies to objects which are to be used for the training of the senses in the infant classes, and for object-lessons, etc., and also as far as possible to those used in the teaching of the science of every-day life.

## INFANT CLASS.

THE following "Kindergarten" and "Object-lesson" subjects shall be prescribed for the first stage of instruction before the children are allowed to begin to learn their letters or to learn to read, &c.:—

## FIRST PERIOD OF INFANT CLASS—ONE YEAR'S COURSE.

*Age about 5 years.*

A.—Kindergarten and Object-lessons for training children by observation or impressions obtained through the senses—

## 1. Through the eye—

## (a) Lessons on form.

Curved lines.

Lines, straight and crooked.

Ball-shaped bodies.

## (b) Lessons on colour—

Black and white substances.

Yellow and red ditto.

Blue and green ditto.

## 2. Through the hand—

Things, hard and soft.

„ rough and smooth.

„ heavy and light.

„ brittle and tough.

## 3. Through sense of taste—

Things, sweet and sour.

„ pungent or hot, sour, salt, and bitter.

B.—Object-lessons on things of every-day life, such as, a flat board or a piece of wood, a box, a stool or chair, a table or school desk; also very simple object-lessons about plants, growing and flowering, indicating the root, the stem, the leaves, the flowers, etc., and their simple uses, and showing that a plant must be watered for it to continue to live.

Very simple lessons about the human body—

Parts of the body—the head, arms, legs, hands and feet.

What the body is made of (bones and flesh).

## C.—Training of hand and eye—

Drawing of curved, straight, and crooked lines.

Drawing of squares and oblongs, circles and figures like circles bounded by curved lines.

## D.—Very simple lessons as to different kinds of animals—

Some animals walk only.

Ditto have 2, 4, and more legs.

Ditto crawl.

Ditto fly.

Ditto swim.

Ditto walk and fly.

Ditto ditto and swim.

Necessity of kindness to domestic animals.

Kindness of children to one another.

E.—From the object-lessons on the leaves of trees and on the hands and feet, etc., the idea of numbers can be readily introduced, and from numbers to addition, subtraction, and simple mental arithmetic.

F.—The children are to be allowed to learn to write the numerals about this stage.

G.—The children must be trained daily in simple physical exercises and in action songs.

H.—Kindergarten occupations such as stick-laying, etc.

#### SECOND PERIOD OF INFANT CLASS—ONE YEAR'S COURSE.

*Age about 6 years.*

##### A.—Training through the senses—

##### 1. Through the eye—

##### (a) Lessons on form—

Extension of lessons given in first period.

Also lessons on angles and on triangles of various shapes.

Also lessons on cube and brick-shaped bodies.

##### (b) Lessons on colour—

Extension of lessons given in first period.

Grey, orange, purple, brown.

##### Through the hand—

Extension of lessons given in first period, showing various degrees of the properties then tested.

##### 3. Through sense of taste—

Extension of lessons given in first period.

##### 4. Through the ear—

Sounds, loud and soft.

„ distant and near.

„ pleasant and unpleasant.

Different animals give different sounds.

Sounds of pain, sounds of pleasure.

Sounds give spoken language.

##### 5. Through the organs of smell—

Pure air has no smell.

Air which has smell is not pure.

Sweet or pleasant smells of flowers.

Unpleasant smell of rotting or decaying vegetation.

Unpleasant smell of rotting or decaying animal matter.

Air with bad smell is unhealthy to breathe.

##### 6. Lessons on size and measurement—

Length, breadth, and thickness.

Measures of length, both vernacular measures, and the yard, foot, and inch.

##### B.—The following object-lessons on common things:—

1. On a stool or chair.
2. „ a slate and pencil.
3. „ a book.
4. „ a tree and its fruit.
5. „ a mango and plantain.
6. „ seeds.
7. „ grass.
8. „ a plant yielding fibres which the children can extract.
9. „ the parts of the human body in greater detail than in the first period.
10. „ a cat.

C.—The hand and eye should be again trained by simple drawing exercises of the same character as those in the first period, but rather more advanced, with the drawing of triangles, rectangles, pentagons, etc., in addition.



Tracing outlines of leaves of plants of various shapes and of other flat bodies on slates. Leaves of plants may be pressed between sheets of paper (old newspaper) to make them lie quite flat.

After tracing a leaf or other flat object on the slate, the pupil should be required to make a freehand copy of his own diagram by the side of it, and compare it and correct it by placing the original object over it. This would help to train the eye and would fix the form of the object more clearly in the memory than simple tracing would.

D.—At this period the children are to begin to learn their letters, etc., and to write the letters of the alphabet and to form short words.

E.—Additional arithmetical exercises, multiplication tables, etc., should be learned. Slates may be used for the simple arithmetic.

F.—Short pieces of poetry should be committed to memory. Some of these should teach morality and the duties of children.

G.—Simple physical exercises and action songs.

H.—Kindergarten occupations such as stick-laying, seed-work, etc.

THIRD PERIOD OF INFANT CLASS—ONE YEAR'S COURSE  
(EQUAL TO STANDARD B OF PRESENT PRIMARY COURSE).

*Age about 7 years.*

A.—Training through the senses—

1. Through the eye—

(a) Lessons on form should include the notions of perpendicular, horizontal, oblique, parallel lines, the circle, sphere, cylinder, prisms, pyramid, and cone.

(b) Lessons on colour should deal with dark and light colours, and with the varying shades of such colours as red, blue, green, yellow, etc.

Primary and secondary colours, browns, greys, etc.

(c) Lessons on the four cardinal points.

2. Determination of weights with the use of bazaar scales.

3. Elementary notions about time should be given (indigenous and European), to include the year, month, week, day, hour, and minute, also division of the year into seasons.

B.—Object-lessons—

3. Further lessons about plants—

Seeds to be sown and grown to form plants.

Object-lessons on plants, such as pumpkin, and on vegetables, such as brinjal, beans, etc., for food.

4. Further lessons about the human body—

The blood; the brain, the skin.

5. Object-lessons about birds (pigeon, duck).

Simple lessons about the cow.

6. Object-lessons on vessels—

An earthen pot.

A water glass or a bottle.

A brass *lotah* or a brass plate (*thala*).

7. Object-lessons on common metals.

coins, copper and silver.

nails, screws.

a knife.

a key for a lock.

8. Object-lessons about plants yielding fibres, more advanced than in the previous stage.

The use of various fibres in the manufacture of cloth for clothing.

**C.—Drawing (Hand-and Eye-training).—**

Drawing on slates, of rather more advanced character than in the two previous stages.

Drawing outlines of leaves, etc., from memory must be practised.

**D.—**The study of reading and arithmetic to be continued, and before passing on to the next stage the children should be able to read very simple language, written and printed, and should be able to write slowly, very simple words from dictation.

**E.—**Verses on the duties of children should be committed to memory and recited.

**F.—**School Drill also to be included.

**G.—**Needle work (*for girls only*).—Hemming.

**H.—**Kindergarten occupations such as stick-laying, seed-work, paper-folding, etc.

**STANDARD I—ONE YEAR'S COURSE (CORRESPONDING TO THE "A" CLASS OF A LOWER PRIMARY SCHOOL).**

*Age about 8 years.*

**Class subjects.**—Reading, Writing,\* Arithmetic,\* Object-lessons and a Primer, with Drawing (Hand-and-Eye-training), Manual work, Needlework for girls, and School Drill.

**Object-lessons (2 pages).—**

**THE SKY.**

**Sunrise, noon, sunset.**—The children are to note with reference to the school-house or village the object over which the sun rises or sets from month to month, and to note also the sun's position at noon, and its varying height above the horizon.

**Shadow.**—The pupils are to notice by aid of an upright stick on a flat piece of ground the varying length of the shadow month by month.

**Moon.**—Note its changes. The pupils should draw the shape of the illuminated portion week by week.

**Day and night.**—Varying length of day and night at different seasons to be noted, and connected with the varying position of the sun as determined at rising and setting and at noon.

The Primer for this class will contain—

**A.—Botany (5 pages).—**

1. A broad sketch of the plant in reference to its three principal parts,—the root, the stem, and the leaf.

2. Talk about a seedling.

3. Distinction between root and stem.—Observe the germination of seed. One part grows upwards—the stem, and the other downwards—the root. If a growing plant be placed in an inverted position for some time, observe that the stem will bend and grow upwards and the root in the contrary direction. (A germinating pea placed upside down will show this.)

**B.—Natural History (10 pages).—**Habits and general description of the following domestic animals with anecdotes: the cow, the cat, and the dog, incidentally illustrating what is meant by herbivorous and carnivorous animals, their offensive and defensive weapons.

**C.—Agriculture (10 pages) for Country schools, for boys only.**—Alternative with Physics and Chemistry.

**Necessaries of Life;** Variety desirable as a protection against failure of crops. **Objects required**—specimens of cereals, pulses, oil-seeds, vegetables, sugar, salt, milk, fibres, straw, bamboos, timber spices.

\* As at present.

**D.—Physics (5 pages) for town schools, for boys only.—**

The following lesson is to be in the form of conversation:—

*Solid substances and some of their properties.*—Take a solid, and show that it has a definite shape. This shape cannot be easily altered.

Some solids may be converted into liquids by heating, e.g., wax.

*Porous bodies.*—Take a piece of charcoal and show the pores. Examine also a piece of unglazed pottery. Water percolates through the pores. Examine blotting paper.

*Liquids and some of their properties.*—As example take water. It has no shape of its own; it takes the shape of the vessel in which it is poured. It breaks into drops. It flows down. Fill a bottle full of water. Try to cork it. The water is difficult to compress.

Solids are converted into liquids by heating; liquids are converted into solids by cooling. Observe how coconut oil becomes solidified in winter.

**E.—Chemistry (4 pages) for town schools, for boys only.—**

Lesson on solubility:—

Take a pinch of common salt, sugar, and finely-powdered chalk respectively in a tumbler, and add the same volume of water to each and stir with a rod. Observe the appearance of the liquids: the water with the salt and sugar is perfectly clear; that containing the chalk is milky. Now pass the liquids through filter papers. Observe that the milkiness in the last has now disappeared. Taste them one by one. The water containing the salt has a brackish taste; that which was poured over the sugar has a sweetish taste, whilst that which was treated with chalk has no taste whatever. Evaporate the liquids in succession in earthenware or enamelled cups. The water evaporates off slowly, and at last we have a residue of salt and sugar; but the water which was similarly treated with chalk leaves nothing behind.

**F.—Hygiene (8 pages), for boys only.—**

*Food.*—Its necessity. Evils of under-feeding and over-feeding. Ordinary articles of food, including meat, eggs, milk, fruits.

*Drink.*—Pure water how obtained. Causes of impurities in water.

*Air.*—Necessity of pure air. Causes of its impurities. How to purify the air of dwelling-houses.

*Sunlight.*—Its necessity in dwelling-houses.

**F(a).—Domestic Economy (8 pages), for girls only.—**

*Bathing.*—Anointing the body before bathing. Bathing as a means of cleaning the body. Bathing of little children.

*Dress.*—Dress capable of improvement. Clothes to be washed and kept clean. Children's clothes to be changed frequently.

*The kitchen.*—Should be kept clean. Removal of refuse. Scrubbing the floor and cleaning walls and the ceiling. Admission of light and air into the kitchen.

**G.—Drawing (Hand-and Eye-training).—Half the first part (of the four parts) of the Indian Drawing Books prepared in the School of Art:—**

A set of Indian drawing copies has recently been supplied by a drawing book in four parts prepared by order of the Government of India. With some additional examples and a carefully-prepared set of instructions for teachers, the first book would be suitable for use in lower primary schools. The examples would have to be enlarged, mounted on pasteboard, and varnished. These enlarged examples would be hung in front of the class and copied by the students on their slates, so that one set would be sufficient for each school. The only expense would be the cost of one book for the teacher and one set of examples for each school. The examples would be of so simple a character that any intelligent teacher by the help of the printed instructions would be able to direct the class in the correct method of drawing them.

One page of directions regarding Drawing is to be included in the Science Primer.

**H.—Manual Training, for boys only.—Leaf and Paper work.**

*Leaves (palm, &c.).*—Making fans of different kinds, whistles, ornamental designs, baskets.

*Paper.*—Paper-folding, paper-modelling, such as caps, boats, and other toys, inkpots, pen-cases, etc., flying kites, flowers, garlands, slings, lanterns, etc., etc., envelopes.

Two pages of the Reader to contain directions about Manual Training.



*Ha*).—Needlework (for girls).—Top-sewing or seaming.

*I*.—Verses teaching the duties of children.

(Two pages at the end of the Primer.)

STANDARD II (CORRESPONDING TO PRESENT LOWER PRIMARY STANDARD).

Age about 9 years.

Class subjects.—Reading, Writing,\* Arithmetic,\* Object lessons and a Primer, with Drawing (Hand-and Eye-training), Manual work, Needlework for girls, and School Drill.†

Object-lessons (2 pages).—

#### THE AIR.

*Winds*.—The pupils should record the varying directions of the winds from season to season, or day to day, also note that some winds are warm, some cold, that some bring rain and some dry weather.

*Air*.—Contains moisture or water vapour shown by two classes of facts—(a) clothes left out in open air at night become damp and wet, salt becomes damp and wet during rainy season, i.e., vapour from air is turned into water, and (b) pools of water and tanks dry up in wind and sun, wet cloth becomes dry when hung in wind and sun, i.e., the water in them turns into vapour. Human breath contains vapour, and this turns to water when a cold slate is breathed upon, or on a cold morning breath becomes visible owing to water being formed from the vapour in it.

*Surface of lands*.—The meaning of the terms plains, valleys, hills, etc., must be explained, and the teacher should make models in clay, sand, etc., to illustrate the meaning of such terms.

The Reader for this class will contain—

#### A.—Botany (5 pages).—

*Root of a plant*.—Function of the root (1) to hold the plant; (2) to supply food. Examine different kinds of roots.

Distinguish between the main roots and rootlets—

Fibrous roots—grass.  
Fleshy roots—radish, beet.  
Adventitious roots—banyan.

#### B.—Natural History (10 pages).—

General description of the members of the cat family with anecdotes.

*Mammals*.—The cat, chosen as a type—external configuration—round face—arrangement and disposition of the hair—habits.

Examination of the paw: (a) under surface; the fleshy pad—the retractile claws—when excited the claws are drawn out of the protecting sheath and the hair stands on end—mode of seizing prey.

The pupil of the cat's eye: almost a vertical line in broad daylight—in the dark it expands.

The cat: its maternal instincts—attitude of the male cat towards the offspring.

The tiger: only a big cat.

#### C.—Agriculture (8 pages), alternative with Physics and Chemistry for village schools, for boys only—

A lesson on rice and a lesson on oilseeds.

\* As at present.

† Books containing instructions in Drill to be prepared.

*D.—Physics—(5 pages), for boys only.—*

*Gases and some of their properties.*—Blow into water through a tube; you see something bubbling up. Blow against your hand; you feel a current of air. Gases cannot be kept in an open-mouthed vessel. Gases are easily compressible.

Resumé of the general properties of matter (ice, water and steam).

Divisibility of matter.

Gravity.

*E.—Chemistry (4 pages), for boys only.—Further lessons about solubility.*

Take some lime in a bottle, fill half the bottle with water, cork it tightly, and violently agitate the contents. Allow to settle over night. Next day carefully decant off the clear liquid; note the *alkaline* nature of the water; divide it into two portions; blow into one by means of a tube of bamboo or some kind of reed. Observe how the water turns milky; the lime which was in solution has now been rendered insoluble and thus *precipitated*. Pass the milky water through a filter. The water is now colourless and devoid of taste. (Cf. Lessons on the Chemistry of a Candle.)

Treat similarly powdered alum, sulphate of copper, charcoal, sand, etc., and find out which of the above are soluble and which insoluble in water.

*F.—Hygiene (8 pages), for boys only.—*

*Cleanliness and dress.*—Bathing: its necessity. How to keep clean. How to keep the house clean. Uses of dress. Different articles used for weaving cloths.

*Exercise and rest*, including change of air.

*Epidemics.*—How to check their spread.

*F(a).—Domestic Economy (8 pages), for girls.—*

*Cooking.*—Cleanliness to be observed. Cleaning of utensils. Supply of good water for cooking food. Articles to be properly prepared and washed before cooking. Food to be prepared and kept covered as far as possible. Rice to be cooked last and eaten before it gets cold. Variety in food.

*Bed-room.*—Day sleep to be avoided. Regular hours of sleep. Over-crowding in rooms injurious. Use of mosquito curtains. Ventilation of rooms. Bedding of infants to be changed when soiled. Bed-clothes and pillows to be aired, and sunned and washed.

*G.—Drawing (Hand- and Eye-training).—Second half of first part of the School of Art Drawing Book.\**

*H.—Manual Training (for boys only).—Exercises in Clay modelling.*

Construction of pots, country lamps, other household articles, models of fruits and playthings.

One page of directions regarding Manual Training is to be included in the Science Primer.

*H(a).—Needlework, for girls.—Running and felling and back-stitching.*

*I.—Verses teaching morality and duties of children (3 pages).*

STANDARD III (CORRESPONDING TO LOWER CLASS OF UPPER PRIMARY SCHOOL)—ONE YEAR'S COURSE.

*Age about 10 years.*

*Class subjects.*—Reading, Writing,† Arithmetic;‡ a Historical, Geographical and Moral Reader; a Science Primer; Drawing (Hand- and Eye-training); Practical Geometry (INSTEAD OF EUCLID); Manual work; Needlework for girls and School Drill.‡

\* These Drawing Books are now in course of revision, and drawings of Indian leaves, plants and animals illustrating the lessons in agriculture, natural history, and botany are to be included in them.

† Arith present.

‡ Drill book to be prepared.

In addition to the Science Primer, a Reader containing lessons in History and Geography will have to be prepared for the Upper Primary Standard, and the first half of this book will be used in this class. This book should contain a few pieces of poetry, also some anecdotes with a moral tendency. It should not exceed 120 pages.

*Object-lessons (2 pages).—*

**WATER.**

*Mist and fog*—Are produced in the air and over tanks, etc., because the vapour, when cooled, changes into little drops of water.

*Clouds*—Are formed in the same way, but in the upper atmosphere.

*Rain*—Comes from these clouds, or from the vapour which has been cooled into drops of water.

*Dew*—Is water formed from vapour on or near the surface of the ground. The pupils should note when dew is formed, i.e., whether during cloudy or cloudless weather, etc., the difference in the amount of dew in different seasons of the year, and on what objects the dew lies thickest.

*Hailstone*—Are rain drops made solid by cold, and they fall usually during thunderstorms. Hailstones should be collected and examined, and allowed to melt in a glass, so that the water can be seen and tested.

*Thunder and lightning*—Also usually occur during storms of rain, hail, etc.

The Science Primer will contain—

*A.—Botany (8 pages)—Stems and their functions—*

*Stems of plants*.—The stem grows upward, so that the plant may get as much light as it can. Green plants cannot grow without light. Observe the discolouration and unhealthy condition of grass growing when shaded from light.

Different kinds of stems—

- a.—Woody stems.
- b.—Climbling stems. Observe the twining tendrils by which the plant obtains support, e.g., cucurbita.
- c.—Succulent stems.
- d.—Underground stems, e.g., potato, turmeric, ginger, etc.

*B.—Natural History (10 pages)—*

Difference between a vertebrate and an invertebrate animal as illustrated by comparing the wings, legs and body of a bird with those of a butterfly.

Animals without a back-bone: a snail, a cray fish, an earth-worm, a milliped, a butterfly, a leech and a cockroach compared with a fish.

The dog as compared with the cat in external appearance—the longish face—claws non-retractile—different breeds of dogs—Newfoundland, spaniel, greyhound, St. Bernard, and the uses they are put to—dogs of the cold countries furnished with a thick coating of fur.

*C.—Agriculture (16 pages) for country schools, for boys only (alternative with Physics and Chemistry).—*

Why crops fail.  
Drought-resisting crops.  
Irrigation from small depth and from great depth.

*D.—Physics (10 pages) for town schools, for boys only—*

*Liquids*.—Surface of liquid is always level. Pressure exerted by liquids in all directions. Bodies weigh less in water than in air. Floating bodies.

*Gases*.—Pressure exerted by the atmosphere. Invert a tumbler filled with water, with the open mouth covered with a card. Observe the water is kept from falling. The syringe.



**E.—Chemistry (6 pages) for town schools, for boys only—**

*Chemistry of a Candle.*—A candle attached to a stout iron wire is lighted and gradually lowered into a wide-mouthed glass bottle: it continues to burn. Observe that the sides of the bottle begin to lose transparency and become covered over with mist. Where does the water come from? The mouth of the bottle is gradually closed with a glass or earthenware plate. The light begins to get more and more dim till it is extinguished. Pour lime-water into the bottle and shake it. The lime-water turns milky. Take some fresh lime-water in a tumbler and blow into it. The lime-water in this case also turns milky.

**F.—Hygiene (16 pages), for boys only—**

*Air.*—Pure air. Cause of its impurities. Overcrowding in houses and public institutions. Means of ventilation.

*Water.*—Its sources of supply. Different ways in which it is rendered impure. How to secure pure water. Filters. Alcoholic and other objectionable drinks.

*Food.*—Why do we eat. Over-eating and under-eating. Different kinds of food, including cereals, pulses, tubers, vegetables, meat, milk and its preparation, sugar, eggs, fruits, preserved foods, condiments.

*Sunlight*, with special reference to its disinfecting action and necessity to health.

**F(a).—Domestic Economy (16 pages), for girls—**

*How to keep rooms clean.*—How they become unclean. Open lamps. Spitting in rooms and on walls improper. Sitting with naked back to the wall. Cobwebs. Children not to play with dirty things in rooms.

*Furnishing rooms.*—Furniture and utensils to be sufficient for the requirements of the household. Everything in its place. Use of lanterns. Advantages of glass or glazed or stone vessels over metallic articles from a sanitary point of view.

*The kitchen.*—To be kept quite clean. Adjoining parts also to be clean. Utensils, cooking vessels, dishes to be made clean before and after use. Admission of light and air into the kitchen.

*Sunlight*, with special reference to its disinfecting action and necessity to health.

**G.—Drawing (Hand-and Eye-training).—8 pages, explaining the lessons in the drawing book and the elementary practical geometry which is to take the place of mensuration are to be included in the Primer.**

*Subjects.*—(1) Freehand drawing with chalk on the blackboard or a prepared wall surface. (2) Elementary practical geometry.

*NOTE 1.*—The value of freehand drawing on the blackboard as a means of physical and hand and eye-training is very great, and is hardly sufficiently appreciated in most schemes adopted in Europe. The facility with which it can be put into practice in any school building which has *pukka* walls makes it especially suitable for India. The advantages of it are that the students do not sit in a stooping position, as in writing or drawing on paper. They stand upright, with the head erect and the example opposite the eye. They walk backwards and forwards occasionally to observe their work at a distance. The hand does not rest on anything, but moves freely on the wrist. This in itself gives the arm and wrist a strength and the hand a certainty of touch, which cannot be acquired by any other kind of drawing.

The difficulty regarding the provision of blackboards or other drawing surface for a large number of students in all the upper primary schools in Bengal is easily surmounted. It is obvious that any upright surface properly prepared will answer as well as or better than a blackboard. Any building which has a *pukka* wall can have a surface prepared for drawing on at comparatively small expense. Portland cement would be the best material: it resists damp and saltpetre, which destroy ordinary plaster, and it makes a surface, when properly prepared, which will last for years. The colour of the surface is the next consideration. The natural colour of Portland cement is dirty and ugly, but by mixing the cement with Indian red (a red ochre which can be obtained easily and cheaply) in the proportion of about 1 to 6 by weight, a low-toned and pleasant colour can be obtained which would not be trying to the eyes. So, instead of blackboards, a band of coloured Portland cement, about 3 feet wide running round the whole class-room, at a height of about 3 feet from the ground, would make an excellent surface for drawing on, and would be a cheerful decorative feature in the class-room. The black-coloured surface is only necessary for a teacher's work in demonstrating figures and diagrams to students who sit at some distance off. For students' drawing practice, it is neither necessary nor desirable. The next question is the drawing examples. These would be taken from the Indian School of Art drawing book alluded to before. They would be mounted on cardboard and hung from a strip of wood fastened to the wall at the upper edge of the drawing surface. The students would enlarge the examples to three or four times the size, so that the copying should not be merely mechanical.

The elementary course of practical geometry is also advocated as being of far greater educational value for students of this age than the learning of Euclid, which is almost sure to degenerate into a mere memory exercise. The instruments required are not expensive. They consist of a pair of pencil compasses, a six-inch scale, and one or two small set squares.

*H.—Manual Training, for boys only.—Weaving (4 pages)—*

Basket-weaving with palm leaves.

String-weaving (knotting, netting, looping, plaiting, weaving of single loop chains of one string, sling-weaving).

*H(a).—Needlework, for girls.—Cross-stitch and making a kurta.*

STANDARD IV (CORRESPONDING TO UPPER PRIMARY CLASS—ONE YEAR'S COURSE).

*Age about 11 years.*

*Class subjects.*—Reading, Writing,\* Arithmetic,\* a Historical, Geographical and Moral Reader, Science Primer, Drawing (Hand and Eye-training), Practical Geometry and Mensuration, Manual work for boys, Needlework for girls and School Drill.†

The second half of the Geographical, Historical and Moral Reader will be taken.

*Object-lessons (3 pages)—*

The action of water in nature and on the surface of the land.

*Water*, when it falls in the form of rain, etc., partly runs over the surface of the ground into tanks, streams, and rivers: it partly sinks into the ground to pass into wells and to reappear in the form of springs, etc., at a lower level, and it partly passes again into the air in the form of vapour.

The action of heavy rain in cutting channels in the earth or soil and in carrying away particles of light material, such as straw and wood, and of soil or earth, or even stones, into the nearest stream, and then into a larger stream or river, should be carefully watched by the pupils.

The pupils should study the nature of the nearest stream of water, determining in what part of the stream the current is most rapid, etc., and ascertaining how it carries away soil and even small stones, and how it cuts away its banks, etc.

The turbid water produced by a rapid stream should be placed in a glass tumbler, and the deposit of silt or soil found at the bottom on standing should be observed. Attention should be drawn to the fact that in this way new earth or soil has been formed in Bengal.

The pupils should be required to decide simple questions, such as—Is the ground on which the school stands level or sloping? Is the ground in the neighbourhood of the school, village or town level or sloping, the nature of the land being ascertained by watching the flow of water after rain (i.e., by the drainage)? It should be noted that the greater the slope of the land, the more rapid will be the flow of water. The action of rain and running water in modifying the surface of the land must be fully explained.

The differences in the erosion of land by running water when (a) the land surface is bare and (b) when the land is covered with grass or vegetation or by forests must be explained.

Water can be made to pass through certain soils, sand, etc., easily, but it cannot pass through clay. This can be experimentally shown.

Wells and tanks are dependent for their supply of water on the level of the water in the soil, and the depth of this from the surface depends upon the nature of the soil, rainfall, etc. Subsoil water is essential to the growth of plants.

\* As at present

† Drill book to be prepared.

The Science Primer for this class to contain—

**A.—Botany (8 pages).—**Lessons on leaves and flowers.

*Leaves.*—Function of leaves.

Different parts of a leaf—the stalk and the blade.

Make a collection and examine the different kinds of simple and compound leaves.

Some leaves are sensitive to touch, e. g., the sensitive plant.

Observe the order in which leaves close when the end of a branch is touched.

*Flowers.*—The function of flowers is to produce seeds which give rise to a new plant.

Study of the different parts of a flower.

Count the number of sepals, petals, stamens and pistils of different kinds of flowers.

Examine pollen grains; also the pistil and the enclosed ovules.

Pollen must fall on the stigma for the maturing of the seed.

Pollination often done by insects. The brightly coloured petals serve to attract the insects.

**B.—Natural History (10 pages)—**

The cow and the horse compared—the cloven foot and the solid foot—other members of the cow family: the bull, the sheep, the goat. Stomach of a goat (a typical ruminant) examined and laid open—the four chambers—the construction of the stomach suited to the habits of the animal which chew the cud.

**C.—Agriculture (16 pages) for country schools, for boys only, all to be done with Physics and Chemistry—**

Food—fodder-yielding trees.

Insects—fungus pests.

Oil—used as cattle food and manure.

**D.—Physics (10 pages) for town schools, for boys only.—**

Heat—

Expansion of liquids and gases.

Make a simple liquid thermometer with a bottle and a tube or quill, explain the principle of a thermometer.

Change of colour—

From solid to liquid.  
" liquid to gas.

Conduction—

Good conductors and bad conductors. Principle of

Convection—

Air currents and

Radiation.

Boiling—

Elastic force of steam.

A simple reading lesson on steam-engine.

**E.—Chemistry (8 pages) for Chemistry of a Candle, Second schools, for boys only.—**

When air is breathed out, an invisible gas comes out which has the property of turning lime-water milky. This gas is also formed when a candle burns. Combustion of this gas is also formed in respiration. The part which oxygen played and compared to fire by means of a pair of bellows. Blow air into a charcoal fire by means of a pair of bellows. The air becomes more and more brisk. The common practice in this becomes more and more brisk by blowing air into it by means of a pair of bellows of stirring a fire to be referred to.

**F.—Hygiene (for boys only)—16 pages**

Slightly more advanced than the matters Primary course—Cleanliness to Epidemics. Ordinary accidents.—Burns, snake-bites, drowning. Wild animals.

*F(a).—Domestic Economy (for girls)—16 pages.*

*Cooking.*—Good water to be used. Every article to be properly prepared and well cleaned and washed before putting it in the cooking pot. Cooking pots to be cleaned before use. Cooked food to be kept covered. Variety of dishes necessary.

*Meals.*—Time of meals. All to eat at the same time if possible. Hall for meals to be spacious and clean. Dishes and cups. Distribution of food. Economy and no waste. Simultaneous eating saves trouble and ensures economy. Evils of eating at separate times. Feeding of infants and little children. Over-feeding and under-feeding.

*Bed-room.*—Elevated bed necessary, especially in damp rooms. Over-crowding bad. Use of curtains. Sunning and washing bedding and clothes. Ventilation of rooms. Soiling of bedding by little children.

*Ordinary accidents.*—Burns, snake-bites, bites of rabid animals, drowning.

*G.—Drawing (Hand- and Eye-training).—*Freehand drawing book. Practical Geometry and Mensuration (15 pages).

*H.—Manual Training (for boys only)—3 pages.*

*Bamboo work.*—(Dao and knife.) Making of sticks, angling rods, paring of split bamboo for fencing purposes, cage-making, frame-work for plants.

*H(a).—Needlework (for girls).—*Cutting out a kurta; sewing on buttons and strings; making buttonholes; marking.

STANDARD V.—CLASS ABOVE THE UPPER PRIMARY STANDARD OR LOWER CLASS OF MIDDLE SCHOOL—ONE YEAR'S COURSE.

*Age about 12 years.*

*Class subjects.*—Reading, Writing,\* Arithmetic,† Literature book (about 150 pages), Geographical and Historical Reader, including some lessons in Physical Geography (together about 150 pages).† Science Reader, Drawing (Hand- and Eye-training), Practical Geometry, Mensuration alternative with Euclid first 26 propositions of book I, Manual work, Needlework for girls and Sewing Drill.†

More advanced Readers, to be prepared, the Middle School Standard in History and Geography, of which one-half would be read in this year's course.

The Science Reader for this class to be read.

*A.—Botany (12 pages).—*

*Life history of a plant.—*

- (1) How plants obtain their food— of the root and leaf.  
A more detailed study of the function of the root and leaf to secure the largest area exposed to light. Transpiration and its use—
- (2) How plants store up food for use—  
(a) in the stem;  
(b) in the root;  
(c) in the seed for future use—the seedling.
- (3) How plants protect themselves by means of thorns and other devices.

*B.—Natural History (12 pages).—Teeth of certain typical animals:*

Arrangement of the prominent canines—in the upper and lower jaw respectively of the carnivore—a characteristic of the carnivore—explained.

Canine and the molar and a rodent compared.

Dentition of a squirrel, the rodent family, the rat, and the squirrel.

present.  
as Low Warner's Citizen of India.  
book to be prepared.



**C.—Agriculture (16 pages) for country schools for boys only (alternative with Physics and Chemistry).—**

Every Middle School choosing Agriculture as an alternative subject in place of Physics and Chemistry should provide itself with land sufficient for a small garden, where each boy can grow a few square yards of some crop. Each boy must also make a collection of at least five articles of agricultural interest for the school museum under the teacher's guidance. In course of time a complete local collection of soils, crops, manures, weeds, oils, fibres and other agricultural produce, insect and fungus pests, insecticides and fungicides, etc., may be made.

Fertility of soil. Lessons on *arabar* and *dhaincha*. How saltpetre is made. Sugarcane and sugar.

**D.—Physics (10 pages) for town schools, for boys only.**

**Light—**

Light travels in a straight line. Shadows.

Reflection of light—plane mirror. Refraction of light. Refraction through a prism.

A double convex lens.—Formation of images by a double convex lens. Use of a lens as a simple microscope.

**E.—Chemistry (6 pages) for town schools, for boys only.—**

**Metals.**

General properties of the metals.—Lustre—malleability; the alloys and their mode of formation. Liability to rust.

• The well-known metals—Gold, silver, copper, tin, lead, zinc, iron, and the alloys brass and *kanse*; the different uses to which they are put.

**F.—Hygiene (for boys only)—20 pages.**

A short chapter defining terms used, and giving some idea of the human body and the functions of nutrition, and respiration.

**Food.**—Components of perfect food. Articles of good food, advantages of variety in foods. Food according to age and occupation.

**Drink.**—Water and its sources of supply.—How to secure good water. Rivers, tanks and wells how to be protected from pollution. Filters; storage of rain-water. Alcoholic and other drinks.

**Air.**—Carbonic acid gas. Other substances that pollute the air. Air inside and outside of houses. Air in towns, swamps, and in dry and high places. Slow poisoning by impure air. Natural purification of air how carried on. Ventilation in houses.

**Construction of dwelling-houses.**—Admission of air and sun light. How to keep the premises clean and dry.

**F(a).—Domestic economy (for girls)—20 pages.**

Feeding, bathing and cleanliness, pure air, ventilation of houses.

Management of common ailments. Colds, coughs, fevers, skin diseases, indigestion. Sick diet.

Burns and scalds, wounds and bruises.

**G.—Free-hand Drawing (Hand- and Eye-training).—**

G(a) Practical plane geometry, including simple practical mensuration of lines and surfaces (15 pages).

G(b) Euclid alternative with G(a) First 26 propositions of 1st Book.†

**H.—Manual Training (for boys).—Bamboo work—3 pages.**

**Bamboo work.**—As in the Upper Primary course.

**H(a).—Needlework (for girls).—Gathering and sewing on a band, darning and herring-boning.**

**STANDARD VI.—MIDDLE STANDARD—ONE YEAR'S COURSE.**

*Age about 13 years.*

**Class subjects.**—Reading, Writing,\* Arithmetic,\* a Literature book, Geographical and Historical Reader, including some lessons in Physical Geography, Science Reader, Drawing (Hand- and Eye-training), Practical Geometry and Mensuration, alternative with Euclid, book I, Manual work for boys, Needle-work for girls and School Drill.†

The second halves of the Geographical and Historical Readers to be prepared.

\* As at present.

† Drill book to be prepared.

‡ In a separate book.

## Science Reader to contain—

## A.—Botany (12 pages).—Life history of a plant.

## How the seeds mature—

- (a) Pollination by insects. The object of bright colouring of the flower-leaves. Insects are also attracted by scent. Observe how small and inconspicuous flowers club together to become conspicuous, e.g., composites.
- (b) Pollination by the wind.
- (c) Water as carrier of pollen grain.

## Dispersion of seeds, and the object of dispersion—

- (a) Winged seeds.
- (b) Seeds which are scattered by mechanical means.
- (c) Seeds which are dispersed through the agency of birds and other animals.
- (d) Dispersion of seed by currents of water.

## B.—Natural History (12 pages).—

Development and metamorphosis of an insect, e.g., a butterfly or a silkworm—the pupa and the chrysalis stage, etc.

Some typical members of the monkey family: The common monkey (*bandar*)—the *lunuman*.

The Snakes: their habits—mode of progression, how the snake bites—the curved, grooved poison fang.

## C.—Agriculture (16 pages) for boys in country schools (alternative with Physics and Chemistry) —

Rotation of crops.  
Feed and keep of cattle.  
Use of bones as manure.

## D.—Physics (10 pages) for town schools, for boys only.—Electricity and Magnetism.

Two kinds of electrification. Action of electrified bodies on one another. A pith-ball electroscope.

Directive action of earth on a magnet. A simple compass needle. Mutual action of similar and opposite poles.

Production of electric currents. Action of a current on a suspended magnetic needle.

## E.—Chemistry (6 pages) for town schools, for boys only.—Elements and compounds, carbon and sulphur.

Carbon, graphite and diamond; the physical properties of each well illustrated and the economical uses to which they are applied. What happens when a piece of charcoal is burnt (*Cf. Lesson on the Chemistry of a Candle*).

Some ideas of an *element* and a *compound* incidentally conveyed. A blade of a knife previously well cleaned is dipped into a solution of sulphate of copper: the deposit of metallic copper shown. The copper a component of sulphate of copper; in a compound the properties of the component elements are entirely changed.

A lesson on Sulphur: its physical properties, colour, brittleness, bad conducting power of heat, fusibility, insolubility in water, economic uses, etc.

## F.—Hygiene for boys only (20 pages)—

*Village conservancy*.—Disposal of filth and sewage. How villages are rendered unhealthy.

*Cleanliness*.—Personal and domestic. Bathing.

*Dress*.—Dress materials. Dress according to weather. Washing clothes.

*Exercise and rest*.—Different kinds of exercise. Sleep and its hours. Absolute rest in certain cases.

*Epidemics*.—Precautions to be taken.

*Accidents*.—Burns, snake-bites, bites of rabid animals, drowning, bleeding.

## F(a).—Domestic Economy for girls (20 pages)—

Management of infectious diseases, including cholera, small-pox, chicken-pox, measles.

*Infection*.—Disinfection of premises, bedding, clothes.

*The sick room*.—Duties of the sick nurse, food and drinks for the sick.

*Cooking of articles of sick diet*.—Necessity of absolute cleanliness in preparing food, including pure water; aerated waters, lime water.

*G.—Drawing (Hand and Eye-training).—Free hand drawing.*

*G(a).—Practical plane Geometry, including simple practical Mensuration of lines and surfaces.—(16 pages).*

*G(b).—Euclid alternative with G(a) whole of 1st Book.\**

*H.—Manual Training for boys only (5 pages).—Bamboo work, woodwork.*

*Bamboo work.*—As in the Upper Primary course.

*Wood work.*—Simple sloyd work with the sloyd knife only.

*H(a).—Needlework for girls.—Cutting out and making a piran; feather-stitching and ornamental marking.*

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\* Euclid will be contained in a separate book.

APPENDIX B.  
CONDENSED TABULAR SYLLABUS.

SUBJECT.	AGE 5.	AGE 6.	AGE 7.	AGE 8.	AGE 9.	AGE 10.	AGE 11.	AGE 12.	AGE 13.
	First year of infant class.	Second year of infant class.	Third year of infant class. "B" Class of Lower Primary School.	Standard I = A Class. Lower Primary School.	Standard II = Lower Primary Class.	Standard III.	Standard IV = Upper Primary Class.	Standard V.	Standard VI = Middle Vernacular Class.
I.	2	3	4	5	6	7	8	9	10
I. Drawing (Hand and eye-training).	Straight, crooked, curved lines; squares, oblongs; circles.	Drawing of triangles, rectangles, pentagons, etc. tracing outlines of flat objects.	Very simple free-hand drawing, tracing of flat objects and reproduction of outline, etc.	Free-hand drawing from copies on slates; first half of 1st School of Art Book.	Free-hand drawing from copies on slates; second half of 1st School of Art Book.	Free-hand drawing ...	Free-hand drawing ...	Free-hand drawing ...	Free-hand drawing ...
II. Kindergarten	Lessons through eye, hand, taste, smell; Kindergarten occupations.	Lessons through eye, hand, taste, smell; lessons on measurement; Kindergarten occupations.	Further lessons through the senses, measurements, weight; lessons about the action of time. Kindergarten occupations.	Nil	Nil	Nil	Nil	Nil	Nil
III. Object-lessons	About school furniture, plants, human body; differences of animals.	About common plants, parts of body, a cat, etc.	On birds, cow; on common metals made from metals; on plants yielding fibre, etc.; on domestic vessels; on parts of the human body.	The sky; the subjects in science, etc., are to be treated as object-lessons.	The air; the subjects in science, etc., are to be treated as object-lessons.	Water; the subjects in science, etc., are to be treated as object-lessons.	The action of water in nature; the subjects in science, etc., are to be treated as object-lessons.	Nil	Nil
IV. Manual training (for boys only).	Nil	Nil	Nil	Leaf manipulation, paper-cutting, and folding.	Clay modelling	Weaving baskets and string weaving.	Elementary bamboo work.	Bamboo-work	Bamboo-work and wood-work.
IVa. Needle work (for girls only).	Nil	Nil	Hemming	Top-sewing or sewing.	Running and felling and back-stitching.	Cross-stitch and making a turba.	Cutting out a turba, sewing on buttons, and string; making button holes; marking.	Gathering and sewing on a band, darning and herring boning.	Cutting out and making a piran; feather-stitching and ornamental marning.
V. Drill (for boys only).	Simple action songs	Simple action songs	Elementary drill and gymnastics.	Drill and gymnastics	Drill and gymnastics	Drill and gymnastics	Drill and gymnastics	Drill and gymnastics	Drill and gymnastics
Va. Drill (for girls only).	Ditto	Ditto	Elementary drill and calisthenics.	Drill and calisthenics	Drill and calisthenics	Drill and calisthenics	Drill and calisthenics	Drill and calisthenics	Drill and calisthenics
VI. Writing	Commence writing numerals.	Writing of simple arithmetic; writing of letters.	Writing short words, etc., from dictation; writing sums.	Writing more complex words and sentences, etc.	Writing complex words and sentences, etc.	Writing complex words and sentences, etc.	Writing complex words, sentences, letters and very simple documents.	Nil	Nil
VII. Arithmetic	Idea of number from object-lessons and Kindergarten.	Simple examples of addition, subtraction, simple multiplication tables; notation up to 100.	Examples of addition, subtraction, multiplication, mental arithmetic; notation up to 1,000.	Four simple rules: mental arithmetic; notation, the whole.	Simple and compound rules, reduction, mental arithmetic, European and native systems.	Simple proportion. G. C. M., L. C. M., mental arithmetic, European and native systems.	Vulgar fractions, interest, problems, mental arithmetic, European and native systems.	Decimals, practice, interest, square root, problems, with native arithmetic.	The whole.
VIII. Reading (Science Primer).	Nil	Learning letters	Children should be able to read simple printed and written language.	Standard I. Science Primer.	Standard II. Science Primer.	Standard III. Science Primer.	Standard IV. Science Primer.	Standard V. Science Reader.	Standard VI. Science Reader.
Science Primer includes the following subjects:—	Nil	Nil	Nil	Simple facts about a seedling and a full-grown plant.	Lessons on the roots of plants.	Lessons on stems	Lessons on leaves and flowers.	Life history of plants	Life history of plants continued.



	Habits and description of domestic animals—cow, cat, and dog.	Further lessons about the cat family.	Differences between vertebrate and invertebrate animals: more about the dog.	Ow and horse compared.	Domestication of animals.	Development and size: members of the monkey family: snakes.
A. Agriculture (for country schools for boys only).	Nil	Lesson on rice and oil-seeds.	A Why crops fail: drought, irrigation.	A Food and fodder: yielding trees, pests, oil-cakes.	A Work in school garden: collection of specimens; also lessons on fertility, pulse crops, sugarcane and salt-petre.	A Work in school garden: collection of specimens; also lessons on fertility, pulse crops, sugarcane and salt-petre.
or						
B. Physical Science (for town schools for boys only).	Nil	Further discussion on properties of matter.	B Pressure exerted by liquids: floating bodies; pressure of atmosphere; syringes.	B Heat—and its effects: conduction, convection, radiation, boiling.	B Light—reflection, refraction.	B Electricity and magnetism.
Chemistry (for town school for boys only).	Nil	Further experiments as to soluble and insoluble substances.	B Chemistry of a candle: first half.	B Chemistry of a candle: second half.	B General and chemical properties of well-known metals.	B Elements and compounds—carbon and sulphur.
Hygiene for boys	Nil	Cleanliness and dress: exercise and rest; epidemics.	Air; water; food; sunlight.	More advanced Lower Primary course: ordinary accidents.	Food; drink; air; dwelling-houses.	Village conservancy; cleanliness; dress; exercise and rest; epidemics; accidents.
or						
Domestic Economy for girls.	Nil	Cooking: bed-room.	How to keep rooms clean: furnishing; sunlight.	Cooking: meals; bed-room; ordinary accidents.	Personal hygiene: treatment of common ailments, burns, scalds, wounds and bruises.	Infectious diseases: infection; sick-room; cooking of sick diet.
IX. Poetry or memoirs (for rising school poems).	Nil	Short pieces to be committed to memory.	Pieces in the Reader to be committed to memory.	Pieces in the Reader to be committed to memory.	.....	.....
X History	Nil	Short pieces to be committed to memory.	First part of Historical portion of Reader.	Second part of Historical portion of Reader.	First part of a more advanced Reader.†	Second part of a more advanced Reader.†
XI Geography	Nil	Short pieces to be committed to memory.	Map of school-room: map of village; first part of Geographical portion of Reader.	Map of district in which school is situated: map of India and world, with special reference to British possessions: second part of Geographical portion of Reader.	First half of more advanced Reader.†	Second half of more advanced Reader.†
XII. Mensuration for boys only.	Nil	Short pieces to be committed to memory.	Taught as practical Geometry.	Elementary practical Geometry, including simple practical Mensuration.	Practical plane Geometry, including Mensuration or First 26 propositions of the First Book of Euclid.	Practical plane Geometry, including Mensuration or First Book of Euclid.
XIII. Literature book, including Grammar and Composition.	Nil	Short pieces to be committed to memory.	Pieces contained in the Reader.	Pieces contained in the Reader.	Literature book	Literature book.

NOTE.—A and B are alternatives for boys. For girls Needle-work takes the place of Manual Training. Agriculture (or Physical Science and Chemistry), Euclid and Mensuration are also omitted for girls.  
 † Such as—Sir W. Lee Warner's "Citizen of India."

## APPENDIX C.

Table showing approximately the number of pages allotted to each Standard.

[The Text-Books prescribed are—The Junior Teacher's Manual (5 annas), the Senior Teacher's Manual (7 annas), the Drill Book (2 annas), the Alphabet and Spelling Book (not more than one anna), Indian Drawing Book, 4 parts (3 annas each), Lower Primary Reader (3 annas), Upper Primary Science Primer (4 annas), Upper Primary Historical, Geographical and Moral Reader (3 annas), Middle Vernacular Science Primer (7 annas), Middle Vernacular Literature Book (4 annas), Middle Vernacular Historical and Geographical Reader (4 annas), Euclid, First book (2 annas) and Arithmetic Book in two parts, the first to Lower Primary Standard, and the second part for Upper Primary and Middle Vernacular Standards, prices 2 and 6 annas, respectively. The Teachers' Manuals, the Drill Book and the Drawing Books need not be purchased by pupils. They should be supplied to schools.]

## APPROXIMATE NUMBER OF PAGES ALLOTTED.

SUBJECT.	1st year Infant class.	2nd year Infant class.	3rd year Infant class.	Standard I.	Standard II.	Standard III.	Standard IV.	Standard V.	Standard VI.
1	2	3	4	5	6	7	8	9	10
I.—Drawing (Hand and Eye-Training)	Nil*	Nil*	Nil*	1 page and Drawing Book No. 1 (1st half).	1 page and Drawing Book No. 1 (2nd half).	Drawing Book No. 2 (1st half).	Drawing Book No. 2 (2nd half).	Drawing Book No. 3.	Drawing Book No. 4.
II.—Kindergarten	Nil*	Nil*	Nil*	.....	.....	.....	.....	.....	.....
III.—Object Lessons	Nil*	Nil	Nil*	2 pages*	2 pages*	2 pages†	3 pages†	.....	.....
IV.—Manual Training (for boys only)...	.....	.....	.....	2 pages*	1 page*	4 pages†	3 pages†	3 pages†	5 pages†.
or	.....	.....	.....	Nil	Nil	Nil	Nil	Nil	Nil.
IVa.—Needlework (for girls only)	.....	.....	.....	Nil	Nil	Nil	Nil	Nil	Nil.
V.—Drill and Gymnastics (for boys only)	Nil†	Nil†	Nil†	Nil†	Nil†	Nil†	Nil†	Nil†	Nil†.
or	Nil†	Nil†	Nil†	Nil†	Nil†	Nil†	Nil†	Nil†	Nil†.
Va.—Drill and Calisthenics (for girls only)	Nil*	Nil*	Nil*	Nil*	Nil*	Nil†	Nil†	.....	.....
VI.—Writing	Nil*	Nil*	Nil*	Nil*	Nil*	Nil†	Nil†	30 pages	30 pages.
VII.—Arithmetic	Nil*	Nil*	Nil*	30 pages	30 pages	30 pages	30 pages	.....	.....
VIII.—Reading of Science Primer including :—	.....	.....	Alphabet and Spelling Book.	5 pages*	5 pages*	8 pages†	8 pages†	12 pages	12 pages.
Botany	.....	.....	.....	5 pages*	5 pages*	8 pages†	8 pages†	12 pages	12 pages.

Natural History ...	.....	.....	.....	10 pages*	10 pages*	10 pages*	10 pages†	12 pages	12 pages.
Agriculture (for country schools for boys only),	.....	.....	.....	10 pages*	10 pages*	16 pages†	16 pages†	16 pages	16 pages.
or	.....	.....	.....	[5 pages*]	[5 pages*]	[10 pages†]	[10 pages†]	[10 pages]	[10 pages.]
Physical Science (for town schools for boys only),	.....	.....	.....	[4 pages*]	[4 pages*]	[6 pages†]	[6 pages†]	[6 pages]	[6 pages.]
and	.....	.....	.....	8 pages*	8 pages*	16 pages†	16 pages†	20 pages	20 pages.
Chemistry (for town schools for boys only).	.....	.....	.....	[8 pages*]	[8 pages*]	[16 pages†]	[16 pages†]	[20 pages]	[20 pages.]
Hygiene (for boys only),	.....	.....	.....	2 pages*	2 pages*	10 pages	10 pages	25 pages	25 pages.
or	.....	.....	.....	[8 pages*]	[8 pages*]	[16 pages†]	[16 pages†]	[20 pages]	[20 pages.]
Domestic Economy (for girls only)	.....	.....	.....	.....	.....	25 pages	25 pages	50 pages	50 pages.
IX.—Poetry ...	.....	.....	.....	.....	.....	25 pages	25 pages	25 pages	25 pages.
X.—History ...	.....	.....	.....	.....	.....	.....	.....	.....	.....
XI.—Geography ...	.....	.....	.....	.....	.....	.....	.....	.....	.....
XII.—Mensuration (for boys only)—	.....	.....	.....	.....	.....	.....	.....	.....	.....
[Number of pages of directions to be included in the Science Primers]	.....	.....	.....	.....	.....	.....	.....	.....	.....
XIII.—Literature Book (including Grammar and Composition).	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total number of pages	Nil	Nil	Nil	70 pages	68 pages + 70 pages (revision).	154 pages	161 pages + 154 pages (revision).	258 pages	260 pages + 258 pages (revision).

\* The Junior Teacher's Manual (a book of about 200 pages) will give directions how the subjects marked (\*) are to be taught. It should be in the hands of teachers of Lower Primary Standards.

† The Drill Book (about 75 pages) should also be in the hands of the teacher only.

‡ The Senior Teacher's Manual (about 250 pages) will give directions how the subjects marked (‡) are to be taught. It will also give directions regarding school management (including keeping of registers and accounts) and discipline. It should be in the hands of teachers of the Upper Primary and Middle Vernacular Standards.

## APPENDIX D.

## THE TEACHER'S MANUAL FOR THE LOWER PRIMARY STANDARD (200 PAGES).

1. *Introduction.*—A short and simple statement of the principles of the Kindergarten method of training young children (10 pages).
2. The Kindergarten occupations and action songs (8 pages).
3. The requirements of the syllabus for the Infant and Lower Primary Standards of Vernacular Education (10 pages).
4. The school-room and arrangement of children (3 pages).
5. Methods of giving lessons on particular subjects; full notes of lessons containing detailed instructions as to how to give lessons on form, colour, writing, reading, arithmetic, etc., so that the pupils might thoroughly learn the subjects taught, and that at the same time their senses might be trained, and their power of expression and all the faculties—physical, mental, and moral—be duly developed (162 pages).
6. Qualifications and duties of a good teacher, and his conduct towards his pupils; punctuality and discipline; corporal punishment (6 pages).

## THE TEACHER'S MANUAL FOR THE UPPER PRIMARY AND MIDDLE VERNACULAR STANDARDS (250 PAGES).

1. *Introduction.*—The principles of Froebel's method, the principles underlying school education, the English Public School system, the Hindu method (20 pages).
2. The requirements of the syllabus for the Upper Primary and Middle Vernacular standards (10 pages).
3. *Class-teaching.*—Instruction and education; collective instruction; attention to individuals; analysis and synthesis; oral teaching and questioning; the Socratic method; answering, proceeding from the known to the unknown, from the concrete to the abstract; the verbal, material and pictorial illustration; the use to be made of analogy and contrast; the use of the black-board; learning by heart; repetition; home exercises; examining (30 pages).
4. Methods of teaching particular subjects, together with notes of lessons selected from text-books prescribed in science, literature, history, geography, etc. (155 pages).
5. Moral training (5 pages).
6. *Organization.*—The organization of a good school, time-tables, the arrangements into sections and classes, and of the standard of classification, the teaching staff, the apparatus and furniture, the register and account books, the drill and recreation, the sanitation of the school-room and school-house, etc. (10 pages).
7. The qualities necessary in a pupil; necessity of punctuality; discipline; rewards and punishment; drill as an aid to discipline (15 pages).
8. Qualifications and duties of a good teacher, and his conduct towards his pupils (5 pages).



APPENDIX E.

*Statement showing the number of hours to be spent in a week on each subject in a Lower Primary School.*

NAMES OF SUBJECTS.	INFANT STAGES.			Standard I.	Standard II.	REMARKS.
	Stage I.	Stage II.	Stage III.			
1	2	3	4	5	6	7
I. Drawing ...	3	3	2	2	2	One teacher aided by two, three, or four Monitors or pupil-teachers is expected to teach successfully a Lower Primary School.
II. Kindergarten ...	3	3	2	Nil	Nil.	
III. Object Lessons ...	3	3	3	4	4	
IV. Manual training for boys only.	Nil	Nil	Nil	2	2	
IVa. Needlework for girls only.	Nil	Nil	(1)	(2)	(2)	
V. Drill for boys only	3	3	3	3	3	
Va. Drill for girls only						
VI. Writing ...	3	6	6	3	3	
VII. Arithmetic ...	3	3	6	6	6	
VIII. Reading (Science Primer).	...	3	3	6	6	
IX. Poetry or memorising short poems.	...	...	...	1	1	
Total ...	18	24	25	27	27	

## APPENDIX F.

*Statement showing the number of hours to be spent in a week on each subject in an Upper Primary School.*

NAMES OF SUBJECTS.	INFANT STAGES.			Standard I.	Standard II.	Standard III.	Standard IV.	
	Stage I.	Stage II.	Stage III.					
1	2	3	4	5	6	7	8	9
I. Drawing ...	3	3	2	2	2	2	2	Ordinarily two teachers with Monitors may be expected to teach an Upper Primary School.
II. Kindergarten ...	3	3	2	...	...	...	...	
III. Object Lessons ...	3	3	3	4	4	3	3	
IV. Manual training for boys only.	...	...	...	2	2	2	2	
IVa. Needlework for girls only.	...	...	(1)	(2)	(2)	(2)	(2)	
V. Drill for boys ...	3	3	3	3	3	2	2	
Va. Drill for girls ...								
VI. Writing ...	3	6	6	3	3	1	1	
VII. Arithmetic ...	3	3	6	6	6	5	5	
VIII. Reading (Science Primer).	...	3	3	6	6	6	6	
IX. Poetry ...	...	...	...	1	1	1	1	
X. History ...	...	...	...	...	...	2	2	
XI. Geography ...	...	...	...	...	...	2	2	
XII. Mensuration for boys only.	...	...	...	...	...	2	2	
XIII. Literature, Grammar, and Composition.	...	...	...	...	...	2	2	
Total ...	18	24	25	27	27	30	30	

APPENDIX G.

Statement showing the number of hours to be spent in a week on each subject in a Middle Vernacular School.

NAMES OF SUBJECTS.	INFANT STAGES.			Standard I.	Standard II.	Standard III.	Standard IV.	Standard V.	Standard VI.	REMARKS.
	Stage I.	Stage II.	Stage III.							
1	2	3	4	5	6	7	8	9	10	11
I. Drawing. ...	3	3	2	2	2	2	2	2	2	
II. Kindergarten ...	3	3	2	...	...	...	...	...	...	
III. Object Lessons	3	3	3	4	4	3	3	...	...	
IV. Manual training for boys only.	...	...	...	2	2	2	2	2	2	
IVa. Needlework for girls only.	...	...	(1)	(2)	(2)	(2)	(2)	(2)	(2)	
V. Drill for boys ...	3	3	3	3	3	2	2	2	2	
Va. Drill for girls ...										
VI. Writing ...	3	6	6	3	3	1	1	...	...	
VII. Arithmetic ...	3	3	6	6	6	5	5	5	5	
VIII. Reading (Science Reader.)	...	3	3	6	6	6	6	6	6	
IX. Poetry ...	...	...	...	1	1	1	1	1	1	
X. History ...	...	...	...	...	...	2	2	2	2	
XI. Geography ...	...	...	...	...	...	2	2	2	2	
XII. Mensuration for boys only.	...	...	...	...	...	2	2	2	2	
XIII. Literature, including Grammar and Composition.	...	...	...	...	...	2	2	6	6	
	18	24	25	27	27	30	30	30	30	

FINAL REPORT OF THE COMMISSIONERS APPOINTED TO CONSIDER  
MANUAL AND PRACTICAL INSTRUCTION IN PRIMARY SCHOOLS  
UNDER THE BOARD OF NATIONAL EDUCATION IN IRELAND.

PART I.

*General conclusions, and the grounds on which they are based.*

I.—*Kindergarten*.—We are of opinion that the general principles and methods of the system known by the name of Kindergarten, which have been already introduced into some of the schools under the National Education Board, should be extended as far as possible to all schools attended by infant children.

II.—*Educational handwork*.—We think that Kindergarten methods and principles should be continued in Classes I, II, and III of ordinary schools in the form of Paper-folding, Cardboard-work, Wire-work, Brick-laying, Clay-modelling and such like exercises. These exercises we include under the general term of *Hand and Eye Training*, and we look upon them as of great importance for the purpose of carrying on the manual training of the children, from the Kindergarten stage to the higher grades of Manual Instruction. Further, we consider that some form of more advanced Manual Instruction should be introduced, as far as possible, in the higher classes of schools for boys; and we recommend as most suitable for this purpose instruction in the principles and practice of *Woodwork*, treated educationally. The object to be aimed at is not to make the boys carpenters, but to train them in habits of accurate observation, careful measurement, and exact workmanship. Such habits we regard as of great value to all boys, whatever may be their subsequent career in life.

III.—*Drawing*.—We recommend that Drawing should be made compulsory, as far as possible, in all National Schools. The first elements of it find a place in the Kindergarten system, and it should be continued, we think, to the end of the school career. In the classes above the Kindergarten, it should be associated with Hand and Eye Training, with Woodwork, and to some extent also with Elementary Science, as soon as these subjects are introduced.

IV.—*Elementary science*.—We are of opinion that a simple course of Elementary Science should form a part of ordinary education in National Schools. This course should be so framed as to bring home to the minds of the children an intelligent knowledge of the common facts of nature, and the rudimentary principles of science. In the lower classes it should consist in great part of object lessons; and in the higher classes it should be illustrated by simple experiments. The pupils should be encouraged and assisted, as far as may be found practicable, to take part in the experiments. The programme for this course, while following everywhere the same general lines, may with advantage be varied in its details, according to the circumstances of the locality and the character and condition of the children.

V.—*Agriculture*.—We do not think that Agriculture as an art, that is to say, practical farming, is a subject that properly belongs to elementary education. At present the study of what is called the Theory of Agriculture is compulsory for boys in all rural schools, and is highly encouraged by fees. But our inquiry has shown that this study consists for the most part in committing a text-book to memory; and we have come to the conclusion that it has little educational or practical value. We recommend instead that the course of Elementary Science to be taught in rural schools should be so framed as to illustrate the more simple scientific principles that underlie the art and industry of Agriculture. We also recommend the maintenance and extension of School Gardens as a means by which these scientific principles may be illustrated and made interesting to the pupils. On the other hand, we do not consider that the maintenance of School Farms, the object of which is to teach the art of Agriculture, properly belongs to the functions of a Board of primary education. As regards the Model Farm at Glasnevin and the Munster Dairy School, we think that they could be made more useful for the purposes of Agricultural education if placed in charge of an Agricultural Department, whenever such a Department is established in Ireland.

VI.—*Cookery, Laundry work, and Domestic Science*.—We think it very desirable that Cookery, Laundry work, and Domestic Science should be taught, as far as may be found practicable, in girls' schools. We cannot advise that these subjects should at present be made compulsory; but we do recommend that aid should be freely given to provide the necessary buildings and equipment for teaching them; and that managers and teachers should be encouraged to take them up by a liberal system of grants.

VII.—*Needlework*.—Needlework should continue to form, as at present, an important element in all schools for girls. The first elements of it are taught in the Kindergarten system. It should be continued in Classes I, II, and III as a part of Hand and Eye Training; and in the higher classes advanced Needlework will naturally occupy the time devoted to Woodwork in schools for boys.

VIII.—*Singing*.—We recommend that Singing should be brought within the reach, as far as possible, of all the children attending National Schools in Ireland. It has a cultivating and refining influence, and furnishes a source of permanent enjoyment. In England and Scotland the number of children who are taught Singing in schools inspected by the State is about 99 per cent. of the number in average attendance; and we see no



reason why an equally good result should not be attained in Ireland, if equal encouragement be given. From the experience of English and Scotch schools, it seems clear the Tonic Sol-fa method of teaching is the most simple and effective. This system has been already adopted in some Irish schools; and we strongly recommend that it be extended as rapidly and widely as may be found possible.

IX.—*Drill and Physical Exercises.*—Various kinds of Drill and Physical Exercises are now a recognised part of primary education in England, in Scotland, and on the Continent of Europe; and we think they should be introduced into the primary schools of Ireland with the least possible delay. We are satisfied, from what we have seen and heard on this subject, that such exercises contribute largely to the health, the spirits, and the general well-being of the children. They are no additional burden on school life, but rather a pleasant form of recreation; and the children return from them to their studies with renewed energy.

It will be for the Commissioners of National Education to consider and determine in what manner these various changes can best be introduced into their system. But we have ventured to make some general suggestions on this head, which it may be well to set forth here in a summary form. Mode of introduction.

We think that the changes recommended ought to be introduced, not all at once, but gradually and tentatively. They should be tried first in the larger centres, and afterwards extended to more remote districts. It would be necessary, at the outset, to engage the services of experts from outside the present staff of the National Education Board, whose duty it would be to organise the classes and to aid the teachers with their counsel and instruction. But we have no doubt that this work, after a little time, could be taken up by the ordinary staff of the Board. Again, it is obviously important that all future teachers should be trained in the new subjects; and the programme of the Training Colleges must accordingly be framed to this end with as little delay as possible.

We have carefully considered the question by what means time may be found for the several exercises in manual and practical training which we have recommended; and we have pointed out certain modifications in the present programme of studies which may be adopted for that purpose, and which, we believe, will not interfere unfavourably with the course of instruction hitherto given in the National Schools.

Lastly, we are strongly of opinion that the system of Results Fees, depending on the individual examination of pupils, at present in force in the National Schools, ought not to be applied to these subjects of Manual and Practical Instruction. While it should be always open to the Inspector to examine individual pupils, we think that the grants awarded to the teacher in these subjects should largely depend on the general evidence of his own zeal and industry, on the efficiency of his method of teaching, and on his power to arrest and hold the attention of his class.

The considerations by which we have been led to the general conclusions above set out will be fully discussed in the second part of this Report, under the several heads of Manual and Practical Instruction. But we think it will be for your Excellency's convenience that the general summary of our conclusions should be here followed by a general summary of the grounds on which they are based—

I.—First, then, there are reasons founded on educational principles. The present system, which consists largely in the study of books, is one-sided in its character, and it leaves some of the most useful faculties of the mind absolutely untrained. We think it important that children should be taught not merely to take in knowledge from books, but to observe with intelligence the material world around them; that they should be trained in habits of correct reasoning on the facts observed; and that they should, even at school, acquire some skill in the use of hand and eye to execute the conceptions of the brain. Such a training we regard as valuable to all, but especially valuable to those whose lives are to be mainly devoted to industrial arts and occupations. The great bulk of the pupils attending primary schools under the National Board will have to earn their bread by the work of their hands: it is therefore important that they should be trained from the beginning to use their hands with dexterity and intelligence.<sup>1</sup> Reasons mainly educational.

II.—Next, we have the practical experience of those schools in England, Scotland, and on the continent of Europe in which such a system as we recommend has been already introduced and tested. The evidence we have received on this point is absolutely unanimous and, as we think, entirely conclusive. We have been told over and over again that the introduction of manual and practical training has contributed greatly to stimulate the intelligence of the pupils, to increase their interest in school work, and to make school life generally brighter and more pleasant. As a consequence the school attendance is improved, the children remain at school to a more advanced age, and much time is gained for the purpose of education. Reasons from experience.

<sup>1</sup> The general educational value of Manual Training in primary schools, especially for those who have to devote their lives to manual work, has been insisted on by a great number of witnesses. The following may be taken as examples:—Mr. A. W. Davis, Director of Manual Training to the Birmingham School Board, vol. ii, pp. 3134–7; Mr. George H. Robinson, Head Master, Board School, Birmingham, vol. ii, pp. 3584–90; Sir Philip Magnus, City and Guilds of London Institute, vol. ii, pp. 4187, 4220–1; Mr. T. G. Cooper, H. M. Inspector of Schools in England, vol. ii, pp. 5136–41; Mr. Solomon Barter, Organiser of Manual Instruction to the London School Board, vol. ii, pp. 4928–34; Mr. Edmund Morris, Instructor in Woodwork to the Barrow-in-Furness School Board, vol. ii, pp. 10448–8a; Mr. Arnold Graves, Honorary Secretary to the Technical Education Association for Ireland, vol. iii, p. 10602; Mr. S. M'C. Murray, Head Master, Sciennes Public School, Edinburgh, vol. iv, pp. 22199–204; Mr. J. G. Kerr, Head Master, Allan Glen's School, Glasgow, vol. iv, pp. 23533–40.

We inquired particularly whether the literary side of school studies—reading, writing, arithmetic, grammar, and geography—had suffered any loss by the change; and the answer was uniform that no such loss had been observed. In some cases we were assured that the literary studies had been positively improved by the introduction of manual training. This result was accounted for partly by the increased intelligence of the children, partly by the constant change and variety of their occupations,—many of the most useful exercises being only a kind of organised play, and partly by their increased interest in their work.

We regard it also as a very significant testimony to the value of manual training that wherever it has been once introduced, it has, with hardly an exception, been continued and extended. There has been practically no disposition to go back to the old system, which made primary education almost exclusively literary in its character; and after an experience extending over some years, there is a general consensus of managers of schools, inspectors, and parents that the value of primary education has been greatly enhanced by the change.

A basis needed for Technical Education.

III.—Lastly, there is a consideration of a practical character which seems to us deserving of no little weight. A strong desire exists throughout this country, and it is growing stronger every day, for the introduction of a general system of Technical Education. It is thought that a good system of Technical Education would contribute largely towards the development of arts and industries in Ireland; and in this opinion we entirely concur. But the present system of primary education is so one-sided in its character that it leaves the pupils quite unprepared for Technical Education. The clever boys trained in the National Schools, if they are disposed to seek for a higher education, may pass with advantage into Intermediate Schools of the kind now general in Ireland; but they are not fit to enter a Technical School, even if they had such a school at their doors. Now it seems to us that the changes we recommend would go far to remedy this defect. The system of National Education, modified as we propose, would give an all-round training to the faculties of the children, and would thus lay a solid foundation for any system of higher education—literary, scientific, or technical—which might afterwards be found suitable to their talents and their circumstances.

The testimony by which the statements made in the three paragraphs of the above section are supported, comprises the whole body of the evidence we have taken in England and Scotland; and it cannot be adequately represented by isolated citations. Nevertheless, we think it may be well to subjoin here a few references to particular passages of the evidence which may be taken as typical examples of what we have everywhere heard—

(1) INCREASED INTELLIGENCE OF THE PUPILS.—*Mr. George H. Robinson*, Head Master, Board School, Birmingham, vol. ii, pp. 3487, 3497; *Hon. E. Lyulph Stanley*, Member of the London School Board, vol. ii, pp. 4402-3; *Mr. J. R. Diggle*, formerly Chairman of the London School Board, vol. ii, p. 4792; *Rev. C. D. Du Port*, H. M. Chief Inspector of Schools in England, vol. ii, pp. 5418-19; *Mr. C. A. Buckmaster*, Senior Inspector of Schools under the Science and Art Department, vol. ii, p. 5589; *Mr. Alfred Percival Graves*, H. M. Inspector of Schools in England, vol. ii, pp. 6192-4; *Sir Joshua Fitch*, formerly H. M. Chief Inspector of Training Colleges in England, vol. ii, p. 6517; *Mr. Edward M. Hance*, Clerk to the Liverpool School Board, vol. ii, p. 7199; *Mr. Jerome Wallace*, Teacher, Harlaw Public School, Canonbie, vol. iv, pp. 21537-8; *Mr. Robert Calder*, H. M. Inspector of Schools in Scotland, vol. iv, pp. 23899-904.

(2) GREATER INTEREST IN SCHOOL WORK, IMPROVED ATTENDANCE, AND LONGER TIME AT SCHOOL.—*Mr. George H. Robinson*, Head Master, Board School, Birmingham, vol. ii, p. 3493; *Sir Philip Magnus*, City and Guilds of London Institute, vol. ii, p. 4170; *Hon. E. Lyulph Stanley*, Member of the London School Board, vol. ii, pp. 4404-5; *Mr. J. R. Diggle*, formerly Chairman of the London School Board, vol. ii, pp. 4577-82; *Mr. William Oulton*, Vice-Chairman of the Liverpool School Board, vol. ii, pp. 6932-4, 7000-5; *Mr. Edward M. Hance*, Clerk to the Liverpool School Board, vol. ii, p. 7199-8, 7298, 7302-3; *Mr. A. T. Holt*, Senior Inspector of Schools to the Liverpool School Board, vol. ii, p. 7698; *Dr. J. H. Gladstone*, F.R.S., formerly Member of the London School Board, vol. ii, p. 9923.

(3) LITERARY STUDIES HAVE NOT SUFFERED.—*Mr. John Taylor*, Head Master, Board School, Birmingham, vol. ii, pp. 3595-700; *Sir Philip Magnus*, City and Guilds of London Institute, vol. ii, p. 4172; *Hon. E. Lyulph Stanley*, Member of the London School Board, vol. ii, p. 4471; *Mr. William Oulton*, Vice-Chairman of the Liverpool School Board, vol. ii, pp. 7059-68; *Mr. Edward M. Hance*, Clerk to the Liverpool School Board, vol. ii, pp. 7199, 7267; *Mr. J. C. Pearson*, Director of Manual Instruction, Liverpool School Board, vol. ii, pp. 8079-80; *Mr. Colin G. Macrae*, Chairman of the Edinburgh School Board, vol. iv, pp. 21882-5, 21901-3; *Mr. A. E. Scougal*, H. M. Inspector of Schools in Scotland, vol. iv, pp. 22673-7; *Mr. G. W. Alexander*, Clerk to the Glasgow School Board, vol. iv, pp. 23219-22.

(4) MANUAL TRAINING ONCE INTRODUCED WAS FOUND USEFUL, TOOK ROOT AND DEVELOPED, AND BECAME POPULAR.—*Mr. A. W. Meris*, Director of Manual Training to Birmingham School Board, vol. ii, p. 3159; *Mr. John Taylor*, Head Master, Board School, Birmingham, vol. ii, pp. 3693-4, 3725-38; *Sir Philip Magnus*, City and Guilds of London Institute, vol. ii, p. 4167; *Hon. E. Lyulph Stanley*, Member of the London School Board, vol. ii, p. 4489; *Mr. T. G. Rooper*, H. M. Inspector of Schools in England, vol. ii, pp. 6034, 6130, 6138-45; *Rev. C. D. Du Port*, H. M. Chief Inspector of Schools in England, vol. ii, pp. 6408-16; *Mr. John Cooke*, Hon. Secretary, Sloyd Association for Great Britain and Ireland, vol. ii, pp. 5618-27; *Mrs. Homan*, Member of the London School Board, vol. ii, pp. 6902, 6949-58, 7019; *Mr. A. T. Holt*, Senior Inspector of Schools to the Liverpool School Board, vol. ii, pp. 7593-608; *Mr. William Nelson*, Superintendent of Manual Instruction to the Manchester School Board, vol. ii, p. 8589; *Mr. A. E. Scougal*, H. M. Inspector of Schools in Scotland, vol. iv, pp. 22576-83; *Sir James Low*, formerly Lord Provost of Dundee, vol. iv, pp. 23743-7.

(5) GENERAL EVIDENCE INCLUDING TWO OR MORE OF THE ABOVE HEADS.—*Sir Joshua Fitch*, formerly H. M. Chief Inspector of Training Colleges in England, vol. ii, pp. 6193-99, 6543-46; *Mr. Solomon Barter*, Organizer of Manual Instruction to the London School Board, vol. ii, pp. 4832-37; *Mr. Arthur Haweridge*, Superintendent of Schools to Barrow-in-Furness School Board, vol. ii, pp. 10282-95; *Mr. Colin G. Macrae*, Chairman of the Edinburgh School Board, vol. iv, pp. 21825-35, 21739-49, 21753-70; *Mr. S. M'C. Murray*, Head Master, Seionna Public School, Edinburgh, vol. iv, pp. 22142-8, 22205-11, 22264-79; *Sir John Cuthbertson*, Chairman of the Glasgow School Board, vol. iv, pp. 22996, 23109-14; *Mr. J. G. Kerr*, Head Master, Allan Glen's School, Glasgow, vol. iv, pp. 23512-23; *Mr. G. J. Terbat*, Head Master, Continuation School, Dundee, vol. iv, pp. 23963-70.

Many witnesses in the course of their evidence have incidentally pointed out the necessity of Manual and Practical Instruction in primary schools as a basis for Technical Education. For example:—*Professor H. E. Armstrong*, City and Guilds of London Institute, vol. ii, pp. 3795-6; *Mr. J. R. Diggle*, formerly Chairman of the London School Board, vol. ii, pp. 4450-61; *Mr. Solomon Barter*, Organizer of Manual Instruction to the London School Board, vol. ii, p. 4838; *Mr. William Oulton*, Vice-Chairman of the Liverpool School Board, vol. ii, p. 6931; *Rev. Brother Thomas*, Principal, De La Salle Training College, vol. ii, p. 14277; *Rev. P. Lally*, Honorary Secretary, Galway Technical School, vol. iv, pp. 2739-42; *Mr. James Perry*, Country Surveyor of Galway, vol. iv, pp. 17291-301; *Mr. Colin G. Macrae*, Chairman of the Edinburgh School Board, vol. iv, pp. 21843-4; *Sir John Cuthbertson*, Chairman of the Glasgow School Board, vol. iv, pp. 23067-9; *Sir James Low*, formerly Lord Provost of Dundee, vol. iv, pp. 23711-14; *Professor Hartley*, F.R.S., College of Science, Dublin, vol. iv, pp. 26248-51, 26923-4.

By order of the Lieutenant-Governor of Bengal,

F. A. SLACK,

Offg. Secy. to the Govt. of Bengal.

## WEATHER AND CROP REPORT.

For the week ending the 3rd July 1899.

**Burdwan.**—Rainfall at Sadar 4·33, Kalna 6·54, Katwa 6·01, Raniganj 2·56. Weather seasonable. Sowing and transplanting of *aman* paddy continue. Standing crops doing well. Fodder and water sufficient. Cattle-disease in Katwa decreasing. Common rice selling as follows:—

	Srs.			
Sadar	...	...	... 16 to 19	} per rupee.
Kalna	...	...	... 15	
Katwa	...	...	... 18	
Raniganj	...	...	... 18½	

**Birbhum.**—Rainfall at Sadar 3·19, Rampur Hât 3·74. Weather cloudy with occasional showers. Sowing of seed and ploughing going on. Price of common rice at Sadar and Rampur Hât 18 seers per rupee. Fodder sufficient. No cattle-disease.

**Bankura.**—Rainfall at Bankura 2·67, Vishnupur 2·90. Weather cloudy with rain almost every day. Transplantation of *aus* and *aman* going on briskly. Sugarcane doing tolerably well. No cattle-disease reported. Fodder and water sufficient. Common rice sells at 17½ seers per rupee at Bankura and Vishnupur.

**Midnapore.**—Rainfall at Sadar 4·41, Contai 4·23, Tamluk 2·47, Ghatal 7·03. Weather seasonable. Prospects of sugarcane, jute and flax favorable. Cattle-disease reported from Chandrakona. Common rice sells as follows:—

	Srs.			
Sadar	...	...	... 12 to 20	} per rupee.
Tamluk	...	...	... 14½	
Ghatal	...	...	... 14 to 18	
Contai	...	...	... 16	

**Hooghly.**—Rainfall at Sadar 4·24, Serampur 4·28, Jahanabad 6·17. Sowing of paddy continues. Excessive rain damaged jute and paddy seedlings. Common rice sells from 12 to 16 seers per rupee.

**Howrah.**—Rainfall at Sadar 7·93, Ulubaria 2·23. Weather cloudy with rain almost every day. Sowing of *aman* and *aus* still continues. Transplantation of *aman* commenced in places. The recent rain has done some damage to the paddy seedlings in Ulubaria. Sugarcane and jute doing well. Fodder and water sufficient. Common rice sells at 12 to 14 seers per rupee.

**24-Parganas.**—Rainfall at Sadar 6·40, Barasat 7·12, Basirhat 1·87, Diamond Harbour 2·91. Weather hot and cloudy with occasional rain. Weeding operations resumed. Prospects hopeful. Cattle-disease reported from Basirhat subdivision. Fodder and water sufficient. Common rice sells as follows:—

	Srs.			
Sadar	...	...	... 13½ to 16	} per rupee.
Barasat	...	...	... 16½	
Basirhat	...	...	... 18-4½oh.	
Diamond Harbour	...	...	... 16	

**Nadia.**—Rainfall at Sadar 5·58, Kushtia 5·23, Meherpur 4·03, Ohuadanga 2·24, Ranaghat 4·76. Weather cloudy and rainy. Prospects of crops promising. Fodder and water sufficient. Price of common rice stationary.

**Murshidabad.**—Rainfall at Sadar 5·50, Kandi 2·58, Jangipur 4·17. Weather seasonable. Transplantation of *aman* still going on. *Bhadoi* and jute thriving well. State of indigo and mulberry good. Most of the paddy is under water on account of excessive rain. Fodder and water sufficient. Common rice sells as follows:—

	Srs.			
Sadar	...	...	... 16	} per rupee.
Kandi	...	...	... 18½	
Jangipur	...	...	... 18	

**Jessore.**—Rainfall at Jessore 6·13, Jhenida 3·82, Magura 8·19, Narail 6·70, Bangaon 2·78. Weather cloudy and rainy; occasionally hot. Weeding of *aus* and jute going on. Prospects of standing crops good. Insects damaging paddy in the subdivisions of Magura, Narail and Bangaon. Cattle-disease reported from thana Gaighata in the Bangaon subdivision. Fodder and water sufficient. Common rice sells as follows:—

			Srs.	
Jessore	...	...	16 to 20	} per rupee.
Jhenida	...	...	16	
Magura	...	...	17 to 20	
Narail	...	...	20	

**Khulna.**—Rainfall at Sadar 7·88, Bagirhat 4·49, Satkhira 3·42. Weather rainy and cloudy. Cultivation and transplantation of *aman* going on. Fodder and water sufficient. Cattle-disease reported from thana Rampal. Common rice sells as follows:—

			Srs.	
Sadar	...	...	19 to 23	} per rupee.
Bagirhat	...	...	20	
Satkhira	...	...	15 and	
			20 (coarse <i>aus</i> ).	

**Rajshahi.**—Rainfall at Sadar 2·67, Nator 5·01, Naugaon 6·39. Prospects of crops good. No cattle-disease. Fodder and water ample. Price of rice ranges from 16 to 23 seers per rupee.

**Dinajpur.**—Average rainfall 5·50. Weather rainy. Cultivation of land for *haimanti* going on. Standing crops good, but weeding of *bhadoi* and jute retarded by incessant rain. Cattle-disease reported from six thanas. Rice selling from 16 to 20 seers per rupee.

**Jalpaiguri.**—Rainfall at Sadar 9·92, Alipur Duars 13·08. Weather cloudy and rainy. *Bhadoi* paddy and jute progressing. Transplantation of *haimanti* paddy commenced. Prospects good. Fodder and water sufficient. Common rice sells from 10 to 13 seers per rupee.

**Darjeeling.**—Rainfall at Darjeeling 8·78, Siliguri 4·92. Weather seasonable. *Hills*—*Bhutta*, *bhadoi* paddy, and *chota marua* doing well. *Terai*—Jute, *bhadoi*, and sugarcane doing well; prospects good; lands being prepared for *haimanti* paddy. Coarse rice sells as follows:—

			Srs.	
Hills	...	...	9 to 12	} per rupee.
Terai	...	...	15 to 19	

*Bhutta* sells at Darjeeling 24 seers and at Kalimpong 40 seers per rupee.

**Rangpur.**—Rainfall at Sadar 2·11, Kurigram 2·76, Gaibanda 5·63, Nilphamari 8·93. Weather rainy. Cutting of *aus* and transplanting of winter rice going on. Prospects good. Common rice selling from 16½ to 20 seers per rupee. Fodder and water sufficient. Cattle-disease reported from one village in thana Jaldhaka in the Nilphamari subdivision.

**Bogra.**—Average rainfall 4·51. Cultivation of *aman* going on. Prospects good. Common rice sells from 17 to 24 seers per rupee. Supply of fodder and water sufficient.

**Pabna.**—Rainfall at Sadar 4·71, Sirajganj 7·94. Weather hot and rainy. Prospects of crops very good. Prices unchanged.

**Dacca.**—Rainfall at Sadar 11·16, Manikganj 4·42, Munshiganj 6·60, Narainganj 6·86. Weather seasonable. Insects have destroyed a good deal of paddy in almost all parts of the district, and are still destroying jute in some parts. Fodder available. No cattle-disease. Price of common rice stationary.

**Mymensingh.**—Rainfall at Sadar 4·13, Jamalpur 2·97, Tangail 6·07, Kishorganj 2·31, Netrokona 6·94. Weather showery. Prospects of crops excellent. Condition of cattle good. Fodder and water ample. Common rice sells as follows:—

			Srs.	
Sadar	...	...	20	} per rupee.
Netrokona	...	...	24	
Tangail	...	...	18	

**Faridpur.**—Rainfall at Sadar 8·93, Goalundo 7·98, Madaripur 11·61. Weather cool and rainy. State and prospects of crops good. Common rice sells at 18 seers per rupee.

**Backergunge.**—Rainfall at Sadar 4·35. Weather showery. Prospects of crops fair. *Aman* rice sells from 14 to 21 seers per rupee.



**Tippera.**—Rainfall at Sadar 1·94, Brahmanbaria 1·18, Chandpur 6·87. Weather seasonable. Standing crops doing well. Prospects favourable. Average price of common rice 19 seers per rupee.

**Noakhali.**—Rainfall at Sadar 4·92, Feni 8·60. Prospects of standing crops fair. No cattle-disease. Fodder and water sufficient. Price of rice stationary.

**Chittagong.**—Rainfall 14·64. Weather cloudy and hot. Cultivation of *aus* progressing. Prices steady. Water and fodder sufficient.

**Patna.**—Rainfall at Sadar 7·58, Bikram 8·00, Hilsa 6·55, Bihar 4·85, Barh 2·69, Dinapore 5·16. Sowing of Indian-corn and transplanting of *marua* going on. Condition of cattle good. Green fodder and water for cattle plentiful. Common rice in Patna sells at 19 seers per rupee.

**Gaya.**—Rainfall at Sadar 5·59, Jahanabad 3·42, Aurangabad 7·74, Nawada 2·41. Paddy and *bhadoi* crops being sown. Common rice selling at 17 seers per rupee.

**Shahabad.**—Rainfall at Sadar 5·98, Buxar 9·02, Bhabua 3·33, Sasaram 7·63. *Bhadoi* and rice crops being sown. Sugarcane doing well. Cattle-disease still in Sasaram subdivision. Prices stationary.

**Saran.**—Rainfall at Sadar 4·02, Siwan 4·61, Gopalganj 2·72. Weather showery. *Bhadoi* sowings almost finished and germinating well. Paddy sowings still going on. General prospects good. Average prices—Common rice 14·15 seers and *makai* 25·8 seers per rupee.

**Champarai.**—Rainfall at Motihari 6·16, Bettiah 7·98, Barharwa 3·67, Bagaha 5·39, Ramnagar 1·95. Prospects good. *Bhadi* sowings continue. Weeding of *makai* and *kodo* and transplanting of *marua* and paddy going on. Price of common rice 13½ seers and of maize 23 seers per rupee.

**Muzaffarpur.**—Rainfall at Sadar 13·69, Hazipur 9·23, Sitamarhi 6·52. Sowing of *bhadoi* crops retarded somewhat owing to continued heavy rain; otherwise prospects good. Prices are—Common rice 12 to 15 seers, wheat 16 to 18 seers, barley 24 seers, *makai* 23 to 24 seers, gram 21 to 24 seers, and *rahar* 20 to 21 seers per rupee.

**Monghyr.**—Rainfall at Monghyr 7·28, Begusarai 4·41, Jamui 5·47. Young standing crops doing well. *Bhadoi* and paddy sowings continue. Weeding of *bhadoi* commenced in places. Common rice sells as follows:—

	Srs.	
Monghyr	12½ to 15	} per rupee.
Begusarai	15	
Jamui	16	

**Bhagalpur.**—Weather hot and warm. Rainfall at Sadar 1·76, Banka 1·78, Madhipura 5·56, Supaul 4·24. Sowing and transplanting of paddy in progress. No cattle-disease except a few cases in Madhipura. Prices stationary.

**Purnea.**—Rainfall at Sadar 4·38, Kishanganj 6·90, Araria 7·45. Weather rainy. Standing crops in good condition. Transplantation of winter rice going on. Prospects generally good. A cessation of rain will benefit crops. No cattle-disease. Fodder and water sufficient. Common rice sells as follows:—

	Srs.	
Sadar	15	} per rupee.
Araria	15	
Kishanganj	16	

**Malda.**—Rainfall at Sadar 5·17, Chanchal 8·00, Shibganj 2·52, Gajole 4·42. Weather warm and showery. Constant rain retarding weeding of *bhadoi* paddy and jute. Indian-corn doing well. Price of common rice stationary at 18 seers per rupee. Fodder ample.

**Sonthal Parganas.**—Abundant rain—average 5 inches. Cultivation active. Price of common rice 14 to 18 seers and of maize 18 to 32 seers per rupee. Cattle-disease in Rajmahal.

**Cuttack.**—Rainfall at Sadar 4·28, Jajpur 1·59, Kendrapara 1·98, Banki 1·90, False Point 4·48. Weather seasonable. *Sarad*, jute and sugarcane growing. *Beali* being weeded and harrowed. Cotton being harvested. Condition of cattle generally good, but cattle-disease reported from some places. Fodder and water sufficient. Common rice sells as follows:—

	S.	ch.	
Cuttack	17	1	} per rupee.
Jajpur	17	1	
Kendrapara	19	11	
Banki	17	15	



**Balasore.**—Rainfall at Sadar 5·84. Sugarcane thriving well. *Beali* and *sarad* growing well and seedlings out in places. Rice sells from 16 to 24 seers per rupee in the interior, and at 17 seers at Balasore and Bhadrak. Cattle-disease in chakla Dhamnagar ceased but appeared in chakla Singla. Fodder and water sufficient.

**Angul.**—Weather seasonable. Rainfall at Sadar 2·39, Bisipara 1·09. Paddy seedlings doing well. Early cotton being sown. Common rice selling at 24 seers per rupee in Angul and 16½ seers in Khondmala.

**Puri.**—Rainfall at Puri 94, Khurda 2·22. *Beali* being harrowed. Sowing of *sarad* crop continues. Sugarcane, *mandia* and other miscellaneous crops doing well. Fodder and water sufficient. Cattle-disease reported from parts of the district. Common rice sells as follows:—

				S. ch.	
Puri	...	...	...	15 12	} per rupee.
Khurda	...	...	...	17 11	
				15 12	
Interior of the district	...	...	...	to 21 0	

**Hazaribagh.**—Rainfall at Sadar 5·79, Giridih 3·60. Weather rainy. Ploughing and sowing in progress. Common rice sells from 15 to 20 seers per rupee.

**Ranchi.**—Rainfall 4·76. Weather seasonable. Ploughing and sowing continue. Rice sells at Ranchi 15 seers per rupee, and in the interior from 16 to 25 seers per rupee. Health of cattle good. Fodder and water plentiful.

**Palamanu.**—Rainfall 4·86. Weather seasonable. Heavy rain everywhere. Sowing of *bhadoi* in full swing. Prospects of sugarcane good. Rice sells at 16 seers per rupee.

**Manbhum.**—Rainfall at Sadar 6·28, Gobindpur 3·57. Weather seasonable. Prospects of crops generally good. Cattle-disease reported from thanas Jhalda and Tundi. Fodder and water sufficient. Average price of common rice at Sadar 18 seers 10 chitaks per rupee and at Gobindpur 18 seers per rupee. Supply sufficient.

**Singbhum.**—Rainfall 2·52. Crops doing well. Rice sells at Kalikapur 22 seers per rupee, and at other places at rates varying from 16 to 20 seers per rupee.

**General Summary.**—Heavy rain has fallen all over the Province. General agricultural prospects are favourable, but in some parts the cultivation is retarded by heavy rain. The sowing of autumn crops and of winter rice and the transplanting of seedlings are in progress. Early rice, jute and sugarcane are in good condition. Insects are said to have destroyed a good deal of the young paddy and jute crops in Dacca, and the paddy plants in some parts of Jessore. Fodder is abundant. Cattle-disease is still reported from many districts. Except for a slight rise in a few districts, the price of common rice remained stationary.

By order of the Lieutenant-Governor of Bengal,

F. A. SLACK,

Offg. Secretary to the Govt. of Bengal.

REVENUE DEPARTMENT,

The 4th July 1899.

## Results of the Meteorological Observations taken at the Allpore Observatory from 25th June to 1st July 1899.

Month.	Day.	Maximum in sun.	Number of hours of bright sunshine.	Mean pressure barometer at 32° Fahr.	TEMPERATURE.				HYGROMETRY.				WIND.		Rain.	WEATHER.
					Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Prevailing direction.	Miles recorded.		
1899.				Inches.	°	°	°	°	°	Inches.	°	%			Inches.	
June	25th	140.4	0.2	29.559	83.4	89.3	18.1	76.2	80.6	1.006	79.4	88	SE by S, SW and SW by S.	129	0.74	Chiefly cloudy, o, d, p.
"	26th	119.9	Nil	559	81.4	85.1	8.1	77.0	79.7	0.992	79.0	81	SW by S, WNW and SW.	122	0.71	Cloudy, o, d, t, p.
"	27th	147.7	"	545	82.1	88.9	12.3	76.6	79.3	0.967	78.2	89	SW by W and variable.	142	3.98	Cloudy, o, g, d, p.
"	28th	140.4	"	551	81.8	87.3	12.1	75.2	79.2	0.964	78.1	89	SW by W, WSW and SSW.	111	0.49	Cloudy, o, d, p.
"	29th	138.6	0.6	570	82.7	87.4	11.0	76.4	79.4	0.963	78.1	86	NNW, SW and variable.	99	0.12	Chiefly cloudy, o, p.
"	30th	144.9	3.4	537	84.3	90.4	12.4	78.0	80.0	0.971	78.3	83	WSW and SW by W.	130	0.01	Chiefly cloudy, o, d.
July	1st	144.4	2.4	524	86.3	93.2	14.2	79.0	80.7	0.975	78.5	78	SW by W and SSW.	115	Nil	Day chiefly cloudy, night clear.

The mean pressure of the seven days ... .. Inches. 29.549

The average pressure of the corresponding period for 24 years, Surveyor-General's Office ... .. 29.518

The total number of hours of bright sunshine ... .. Hours. 6.6

The maximum possible number of hours of sunshine ... .. 94.3

The mean temperature of the seven days ... .. 83.1

The average temperature of the corresponding period for 24 years, Surveyor-General's Office ... .. 84.1

The extreme variation of temperature ... .. 18.0

The maximum temperature ... .. 93.2

The highest velocity of the wind in one hour ... .. Miles. 12

The mean relative humidity ... .. 86

The average relative humidity of the corresponding period for 24 years, Surveyor-General's Office ... .. 84

The total fall of rain from 25th June to 1st July 1899 ... .. Inches. 6.05

The average fall of the corresponding period for 24 years, Surveyor-General's Office ... .. 2.76

The total fall from 1st January to 1st July 1899 ... .. 29.63

The average fall of the corresponding period for 24 years, Surveyor-General's Office ... .. 21.96

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h., 10h., 16h., and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard, Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beekley's anemograph. The mouth of the rain-gauge is one foot above the ground.

o, overcast; g, gloomy; d, drizzling rain; t, thunder; p, passing temporary showers.

METEOROLOGICAL OFFICE, GOVT. OF INDIA,  
Calcutta, the 3rd July 1899.

G. W. KUHLER,  
For Meteorological Reporter to the Govt. of India.

**IRRIGATION DEPARTMENT, BENGAL.**  
**IRRIGATION OPERATIONS FOR THE OFFICIAL YEAR 1899-1900.**  
*Areas leased for Irrigation up to end of May 1899.*

CIRCLE.	District.	Canal.	Estimated full discharge.	Average discharge in month.	Discharge utilized.	Approximate area of land irrigated during the year up to the end of the month.	Approximate area of land under irrigation up to the same date last year.	DETAILS OF AREAS LEASED.										Rainfall, 1899-1900.		REMARKS.		
								Season leases.					Grand Total.	Total.	Hot-weather.	Rainfall, 1899-1900.						
								Long-term leases.	Kharif.	Rabi.	Sugarcane.	Bhadol.				During month.	Up to end of month.	During month.	Up to end of month.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
UPPER.	Cuttack.	Taldanda, 1st reach	1,343	371	130	...	...	13,944	...	...	...	...	...	...	...	13,944	7.53	14.87	9.30	3.70	Kakal.	
		Ditto, 2nd	565	333	141	...	...	23,037	...	...	...	...	...	...	...	23,037	{ 7.00	6.30	9.05	4.15	Bala.	
		Machgon	776	33	...	...	...	43,636	...	...	...	...	...	...	...	43,636	{ 10.66	17.60	9.48	4.39	Jagatnagar.	
		Kendrapara	1,067	170	...	...	...	3,469	...	...	...	...	...	...	...	3,469	8.00	13.97	3.10	5.54	Kendrapatna.	
		Gohri	873	63	...	...	...	3,235	...	...	...	...	...	...	...	3,235	9.28	17.09	1.36	2.86	Marbhagui.	
		Do. Extension	644	45	...	...	...	12,259	...	...	...	...	...	...	...	12,259	7.23	12.06	2.47	3.98	Kendrapara.	
		Patamundi	885	86	...	...	...	20,299	...	...	...	...	...	...	...	20,300	6.81	10.27	1.29	4.00	Ichapur.	
		High Level, Range I	608	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Nurtang.
		Ditto, do. II	727	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Janapur.
		Jajpur Canal, Range III	727	...	...	...	...	...	...	...	...	...	...	...	...	...	...	No gauge.	...	...	...	Jajpur.
UPPER.	Balasore.	High Level, Range III	727	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Athoyapada.	
		Total	...	...	...	790	377	160,415	...	...	...	...	...	...	...	161,135	9.56	11.17	3.11	2.61		
		Total of the corresponding period of last year	...	...	...	...	...	154,280	...	...	...	...	...	...	...	160,053	11.81	14.27	4.93	5.91		
		Midnapore	1,411	8.64	...	...	...	60,122	...	...	...	...	...	...	...	...	60,122	7.64	9.53	1.69	3.13	13 days discharging.
		Panchikura	522	53.12	...	...	...	5,925	...	...	...	...	...	...	...	...	5,925	7.36	12.56	3.44	4.68	
		Tidal Reach, Range I & II	...	...	...	...	...	1,397	...	...	...	...	...	...	...	1,397	...	...	...	...		
		Total	...	...	...	...	...	67,444	...	...	...	...	...	...	...	67,444	...	...	...	...		
		Total of the corresponding period of last year	...	...	...	...	...	67,663	...	...	...	...	...	...	...	67,663	...	...	...	...		
		Western Main	4,343	1.125	130	334	781	11,428	...	...	...	...	...	...	...	...	11,745	0.41	0.78	0.69	0.89	
		Buxar	1,256	2.94	141	5,335	4,817	61,340	...	...	...	...	...	...	...	...	66,495	2.67	4.55	0.80	0.80	
SOUTH-WEST.	Shahabad.	Arrah	2,000	640	329	13,492	13,012	117,575	...	...	...	...	...	...	...	130,832	3.77	4.55	0.80	0.80		
		Eastern Main	1,468	160	130	1,401	49	81,455	...	...	...	...	...	...	...	...	1,613	4.25	3.01	3.01	3.01	
		Patna	...	...	...	1,444	2,740	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
		Total	...	...	...	30,719	21,429	243,289	...	...	...	...	...	...	...	...	264,301	...	...	...	...	
		Total of the corresponding period of last year	...	...	...	...	...	267,834	...	...	...	...	...	...	...	...	309,474	...	...	...	...	
		Grand Total	...	...	...	21,450	21,216	471,146	...	...	...	...	...	...	...	...	492,780	...	...	...	...	
		Grand Total of the corresponding period of last year	...	...	...	...	...	469,780	...	...	...	...	...	...	...	...	...	...	...	...	...	
		Grand Total of the corresponding period of last year	...	...	...	...	...	24,096	...	...	...	...	...	...	...	...	24,096	...	...	...	...	
		Grand Total of the corresponding period of last year	...	...	...	...	...	24,096	...	...	...	...	...	...	...	...	24,096	...	...	...	...	
		Grand Total of the corresponding period of last year	...	...	...	...	...	24,096	...	...	...	...	...	...	...	...	24,096	...	...	...	...	

\* There are no separate leases for sugarcane on the Sone Canal. All leased fields of that crop now come under one of the other heads.

Calcutta,  
The 4th July 1899.

A. H. O. MACCARTHY,  
Under-Secy. to the Govt. of Bengal.

## IRRIGATION DEPARTMENT,--BENGAL.

Statement showing heights over mean sea-level and low-water in the rivers Ganges, Bhagirathi, Jalangi, and Brahmaputra, for the month of May 1899.

RIVER GANGES.																								RIVER JALANGI.		RIVER BRAHMAPUTRA.	
MIRAPUR.		BONARA.		BARAN.		DINAPORA.		MONGHYR.		SAHIBGANJ.		RAMPUR BOALIA.		GOOLBADA.		BERHAMPUR.		SUREPANGJ.		GANAHID.							
From Allahabad ... 134		From Mirzapur ... 46		From Benares 60		From Benares 177		From Benares 307		From Benares 581		From Benares 471		From Benares 581		From Benares 130											
Height over zero of gauge.	Height over mean sea-level.	Height over zero of gauge.	Height over mean sea-level.	Height over zero of gauge.	Height over mean sea-level.	Height over zero of gauge.	Height over mean sea-level.	Height over zero of gauge.	Height over mean sea-level.	Height over zero of gauge.	Height over mean sea-level.	Height over zero of gauge.	Height over mean sea-level.	Height over zero of gauge.	Height over mean sea-level.	Height over zero of gauge.	Height over mean sea-level.	Height over zero of gauge.	Height over mean sea-level.	Height over zero of gauge.	Height over mean sea-level.	Height over zero of gauge.	Height over mean sea-level.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
Below zero.	Below zero.	Below zero.	Below zero.	Below zero.	Below zero.	Below zero.	Below zero.	Below zero.	Below zero.	Below zero.	Below zero.	Below zero.	Below zero.	Below zero.	Below zero.	Below zero.	Below zero.	Below zero.	Below zero.	Below zero.	Below zero.	Below zero.	Below zero.				
1st	1.17	204.45	1.17	204.45	0.79	184.01	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
2nd	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
3rd	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
4th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
5th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
6th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
7th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
8th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
9th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
10th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
11th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
12th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
13th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
14th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
15th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
16th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
17th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
18th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
19th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
20th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
21st	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
22nd	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
23rd	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
24th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
25th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
26th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
27th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
28th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
29th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
30th	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				
31st	1.17	204.45	0.88	185.27	0.88	185.27	1.25	185.35	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33	185.73	1.33				

CALCUTTA,  
The 4th July 1899.A. H. O. MACCARTHY,  
Under-Secy. to the Govt. of Bengal.

## CIRCULAR AND EASTERN CANALS.

*Approximate Return of Traffic for the week ending Saturday, the 1st July 1899,  
as compared with the corresponding week of the previous year.*

NATURE OF CARGO.	WEEK ENDING SATURDAY, THE 1ST JULY 1899.			WEEK ENDING SATURDAY, THE 2ND JULY 1898.		
	Number of boats.	Weight of cargo.	Tollage.	Number of boats.	Weight of cargo.	Tollage.
	No.	Mds.	Rs.	No.	Mds.	Rs.
Rice and paddy	341	50,750	785	176	20,819	238
Jute	10	7,350	118	28	18,150	242
Firewood	29	28,225	427	40	24,380	515
Other articles	788	2,39,817	3,258	455	1,38,080	1,838
Total	1,118	3,26,142	4,588	694	2,04,409	2,828



## EASTERN BENGAL STATE RAILWAY.

Abstract of principal Commodities carried over the Eastern Bengal State Railway during the month of April 1899, as compared with the same month of the previous year.

Commodities.	1899.		1898.		Total.		Increase.	Decrease.
	Up.	Down.	Up.	Down.	1899.	1898.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Coal and Coke carried for the Public and Foreign Railways.	4,851	12,231	7,899	12,885	17,102	20,744	3,642	3,642
Cotton, raw	500	68	345	290	400	400	0	10
Cotton, manufactured—								
Twist and yarn, European	223	185	185	222	185	185	37	0
Ditto, Indian	79	110	253	65	189	314	125	129
Piece-goods, European	1,637	7	2,074	9	1,034	2,045	1,011	481
Ditto, Indian	16	3	34	5	19	39	20	20
Drugs and Chemicals—								
Intoxicating, other than opium	13	31	18	23	33	44	11	11
Non-intoxicating—								
Chichona bark	64	2	60	1	65	61	4	0
Others	0	0	0	0	0	0	0	0
Dyes and Tans—								
Indigo	18	30	18	30	18	30	0	0
Myrabolans	67	68	33	687	745	670	75	17
Alizarine and aniline dyes	11	13	11	11	11	18	7	7
Al (Morinda-Chinola)	0	0	0	0	0	0	0	0
Others	0	0	0	0	0	0	0	0
Grain and pulse—								
Wheat	5	2,114	16	275	2,119	291	1,828	0
Paddy	2,230	5,406	2,373	6,478	7,740	8,851	1,111	1,105
Rice	4,010	5,651	3,025	1,703	10,181	6,328	3,853	0
Jowar and bajra	1,236	12,087	1,438	3,091	12,943	9,469	3,474	0
Gram and pulse	3	100	183	200	163	302	139	0
Others	0	0	0	0	0	0	0	0
Hides and skins—								
Hides of cattle—								
Dressed or tanned	12	637	80	980	740	1,039	299	0
Raw	0	0	0	0	0	0	0	0
Skins of sheep, &c.—								
Dressed or tanned	3	30	0	0	0	0	0	0
Raw	0	0	0	0	0	0	0	0
Horns	0	0	0	0	0	0	0	0
Hemp and other fibres	0	0	0	0	0	0	0	0
Java—								
Raw	56	12,321	8	12,121	12,377	12,129	248	0
Gunny-bags and cloth	1,098	434	1,100	229	1,330	1,435	105	0
Lac—								
Stick	0	20	0	23	23	23	0	0
Shell	0	0	0	0	0	0	0	0
Leather, manufactured	14	0	21	0	14	21	7	0
Liquors—								
Alc and beer	23	2	40	0	23	40	17	0
Distills of all kinds, including country spirits	79	0	7	0	79	7	72	0
Wines	0	0	81	1	0	82	82	0
All other sorts, including toddy and fermented liquor, other than alc and beer.	0	0	0	0	0	0	0	0
Metals—								
Copper, unwrought	12	4	10	0	16	10	6	0
Brass, ditto	0	0	0	0	0	0	0	0
Copper, wrought	0	0	0	0	0	0	0	0
Brass, do.	31	79	100	63	164	162	2	0
Iron and steel	0	0	0	0	0	0	0	0
Cast	0	0	0	0	0	0	0	0
Unwrought	0	0	0	0	0	0	0	0
Wrought	0	0	0	0	0	0	0	0
Manufactures of	0	0	0	0	0	0	0	0
Others	0	0	0	0	0	0	0	0
Oil—								
Kerosine	7,073	94	6,434	80	7,767	6,404	1,363	0
Castor	0	0	0	0	0	0	0	0
Cocunut	0	0	0	0	0	0	0	0
Mustard and rape	215	6	185	3	266	118	148	0
Others	37	0	0	0	0	0	0	0
Oilseeds—								
Linseed	4	2,800	3	2,644	2,918	2,647	271	0
Rape and mustard	96	2,887	167	1,603	2,003	1,850	153	0
Til or jinjil	0	0	0	0	0	0	0	0
Poppy	0	0	0	0	0	0	0	0
Earthnuts	0	0	0	0	0	0	0	0
Castor	0	0	0	0	0	0	0	0
Others	12	4	17	44	6	61	55	0
Opium	0	0	0	0	0	0	0	0
Paper and pasteboard	241	345	90	286	686	345	341	0
Provisions—								
Ghee	68	4	68	7	72	59	13	0
Dried fruits and nuts	1	0	0	0	1	0	1	0
Others	1,114	681	680	681	1,715	1,651	64	0
Railway plant and rolling-stock carried for the Public and Foreign Railways—								
Locomotives, engines, and tenders and parts thereof	6	0	0	0	6	0	6	0
Carriages and trucks and parts thereof	0	0	0	0	0	0	0	0
Materials—								
Steel rails and fish-plates, sleepers, and keys of steel and cast-iron.	190	1,330	0	0	1,930	1,930	0	0
Other sorts	371	623	330	436	803	774	29	0
Salt	4,797	111	3,000	87	4,908	4,687	221	0

STAPLES.	1898.		1899.		Total.		Increase.	Decrease.
	Up.	Down.	Up.	Down.	1898.	1899.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.		
Saltetre, &c.—								
Saltetre	1		7		1	7		6
Other saline substances								
Silk, raw—								
Foreign				20	18	26		8
Indian		18						
Silk piece-goods—								
Foreign								
Indian—								
Muga								
Endi								
Spices—								
Betel-nuts	475	387	263	986	682	1,379		617
Pepper	20		60		20	60		40
Ginger	12	93		99	105	109		4
Chillies	143	88	143	94	281	236		45
Cardamoms		19		8	10	11		1
Others	130	794	124	538	916	656		260
Lime and lime-stone	1,105	73	712	657	1,178	1,209		31
Sugar—								
Refined or crystallised, including sugar-candy.	173	11	337	7	184	334		150
Unrefined, viz., molasses and jaggery or gur, and other saccharine produce.	1,123	813	1,023	1,793	1,035	2,331		896
Tee—								
Foreign	1	236		311	236	311		75
Indian	230	232	338	202	513	438		75
Timber								
Tobacco—								
Unmanufactured	99	2,813	67	2,833	2,911	2,890		21
Manufactured—								
Cigars	7	1	3	3	8	4		4
Other sorts								
Wool, raw		231	2	195	231	197		34
Wool, manufactured—								
Carpets and rugs								
Piece-goods, European			5	2	7	7		
Ditto, Indian	7							
Other sorts								
All other articles of merchandise	6,549	3,323	7,489	4,087	8,872	11,516		2,644
Total	42,833	67,758	46,067	61,093	110,501	107,700	14,720	11,808

CALCUTTA, the 3rd July 1899.

H. STEUART,  
Examiner of Accounts.

## Weekly Return of Traffic Receipts on Indian Railways.

## BENGAL CENTRAL RAILWAY COMPANY, LIMITED.

Approximate Return of Traffic and mileage for the week ended 17th June 1899 on 125 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. c.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	34,180	14,892 0 0	47,970 0	4,342 3 0	285 0 0	19,500 0 0	5,041	2,579	7,620
Or per mile of railway ...	273	119 0 0	378 0	35 0 0	2 0 0	156 0 0			
For previous 23 weeks of half-year ...	777,774	2,96,008 0 0	14,97,250 0	1,05,808 0 0	64,550 0 0	4,66,851 0 0	114,511	56,928	170,739
Total for 24 weeks ...	811,954	3,11,765 0 0	15,44,520 0	1,09,740 0 0	64,835 0 0	4,86,360 0 0	119,552	59,507	176,359
COMPARISON.									
Total for corresponding week of previous year ...	30,878	10,100 0 0	47,140 0	2,935 0 0	111 0 0	13,243 0 0	4,460	2,464	6,924
Per mile of railway corresponding week of previous year ...	247	81 0 0	377 0	24 0 0	1 0 0	106 0 0			
Total to corresponding date of previous year ...	788,016	3,26,816 0 0	14,00,472 0	1,01,323 0 0	64,602 0 0	4,08,033 0 0	120,234	53,123	172,357

\* Audited up to 6th May 1899.

## SEGOWLIE-RAKSAUL BRANCH RAILWAY.

(WORKED BY THE B. N.-W. RAILWAY.)

Audited Return of Traffic for week ending 13th May 1899 on 18 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Passengers carried.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
	No.	Rs. A. P.	Mds.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week on 18 miles open ...	1,003	298 7 6	3,654	124 7 0	4 8 0	427 13 0	440	56	506
Or per mile of railway ...	55.72	16 9 4	203.00	6 14 7	0 4 0	23 11 11			
For previous 14 weeks of half-year ...	10,308	2,315 4 2	85,110	2,624 4 0	58 7 0	4,807 15 2	3,043	2,083	5,026
Total for 15 weeks ...	11,311	2,613 11 8	88,764	2,645 11 0	63 15 0	5,325 5 8	4,383	2,143	6,526
COMPARISON.									
Total for corresponding week of previous year on 18 miles open ...	1,003	298 7 6	3,654	124 7 0	4 8 0	427 13 0	440	56	506
Per mile of railway corresponding week of previous year ...	55.72	16 9 4	203.00	6 14 7	0 4 0	23 11 11			
Total to corresponding date of previous year ...	10,308	2,315 4 2	85,110	2,624 4 0	58 7 0	4,807 15 2	3,043	2,083	5,026

## SEGOWLIE-RAKSAUL BRANCH RAILWAY.

(WORKED BY THE B. N.-W. RAILWAY.)

Approximate Return of Traffic for week ending 24th June 1899 on 18 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Passengers carried.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
	No.	Rs.	Mds.	Rs.	Rs.	Rs.			
Total traffic for the week on 18 miles open ...	1,037	330	11,067	394	3	337	357	147	504
Or per mile of railway ...	57.61	18.78	614.83	21.89	0.16	18.83			
For previous 14 weeks of half-year (a) ...	14,967	4,073	1,42,413	4,503	67	4,643	6,084	2,932	9,016
Total for 15 weeks ...	17,404	4,303	1,53,480	4,897	90	4,990	6,441	3,079	9,520
COMPARISON.									
Total for corresponding week of previous year on 18 miles open ...	1,037	330	11,067	394	3	337	357	147	504
Per mile of railway corresponding week of previous year ...	57.61	18.78	614.83	21.89	0.16	18.83			
Total to corresponding date of previous year ...	14,967	4,073	1,42,413	4,503	67	4,643	6,084	2,932	9,016

(a) Includes audited figures up to week ending 13th May 1899.

## BENGAL AND NORTH-WESTERN RAILWAY.

Approximate Return of Traffic for week ending 24th June 1899 on 1,082 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated), including steam-boat.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week on 1,082 miles open ...	169,510	Rs. 68,480	Mds. 6,00,120	Rs. 20,580	Rs. 19,930	(a) 1,70,930	28,517	(b) 85,780	61,246
Or per mile of railway ...	156,94	81.18	610.00	83.70	18.44	160.2	.....	.....	.....
For previous 24 weeks of half-year (c) ...	3,378,955	13,27,637	1,63,54,923	21,73,652	4,60,331	41,923	873,422	746,816	1,520,036
Total for 25 weeks ...	3,448,765	13,97,367	1,70,15,043	22,04,212	4,60,184	41,21,743	329,337	782,645	1,951,982
COMPARISON.									
Total for corresponding week of previous year on 925 miles open ...	185,044	64,163	4,90,945	54,216	3,34,146	1,32,544	21,138	(d) 23,619	47,007
Per mile of railway corresponding week of previous year ...	144.93	47.73	500.94	58.64	36.92	143.39	.....	.....	.....
Total to corresponding date of previous year ...	3,150,817	12,07,036	1,50,10,468	18,56,383	3,79,243	36,03,464	408,938	619,446	1,110,780

- (a) Increase due to improvement of traffic on main line.  
 (b) Includes 4,025 miles of ballast trains run on open line.  
 (c) Audited figures up to week ending 13th May 1899.  
 (d) " 3,093 miles of ballast trains run on open line.

## ASSAM-BENGAL RAILWAY.

Approximate Return of Traffic for the week ended 17th June 1899 on 396 miles open for all descriptions of Traffic and an additional 37 miles for goods and parcels traffic only.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	83,692	Rs. 14,274 0 0	Mds. 2,60,268 0	Rs. 12,200 0 0	Rs. 270 0 0	Rs. 27,053 0 0	3,554	7,409	11,049
Or per mile of railway ...	69.83	36.05	661.08	30.89	0.68	68.56	8.97	17.29	26.25
For previous 23 weeks of half-year ...	717,801	4,60,387 0 0	60,97,002 0	2,42,331 0 0	17,425 0 0	7,29,183 0 0	68,174	126,830	230,054
Total for 24 weeks ...	741,493	4,63,661 0 0	63,57,270 0	2,64,440 0 0	17,705 0 0	7,66,306 0 0	91,728	204,366	230,096
COMPARISON.									
Total for corresponding week of previous year ...	23,178	15,000 0 0	2,45,364 0	11,324 0 0	192 0 0	24,406 0 0	3,423	4,839	8,364
Per mile of railway corresponding week of previous year ...	61.04	45.63	600.56	28.91	0.66	61.80	11.37	16.93	28.40
Total to corresponding date of previous year ...	637,774	3,93,691 0 0	57,03,470 0	2,15,743 0 0	15,747 0 0	6,14,195 0 0	75,172	112,568	1,97,715

\* Includes audited figures for week ending 13th May 1899.

## FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Assam-Bengal Railway.

RECEIPTS FOR WEEK ENDING 17TH JUNE 1899.			RECEIPTS FOR WEEK ENDING 13TH JUNE 1898.			TOTAL RECEIPTS FROM 1ST APRIL 1899 TO 17TH JUNE 1899.			TOTAL RECEIPTS FROM 1ST APRIL 1898 TO 13TH JUNE 1898.			Total increase in 1899.	Total decrease in 1899.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.		
453	Rs. 27,053	Rs. 66.60	393	Rs. 24,406	Rs. 64.60	433	Rs. 3,16,220	Rs. 809	389	Rs. 1,60,076	Rs. 38.24	.....	.....



SUPPLEMENT TO  
**The Calcutta Gazette.**

WEDNESDAY, JULY 12, 1899.

OFFICIAL PAPERS.

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RESOLUTION ON THE ANNUAL REPORT ON EMIGRATION FROM THE PORT OF CALCUTTA TO BRITISH AND FOREIGN COLONIES FOR THE YEAR 1898.

GENERAL DEPARTMENT.—EMIGRATION.

Darjeeling, the 6th July 1899.

RESOLUTION—No. 506T.G.

READ—

The Annual Report on Emigration from the Port of Calcutta to British and Foreign Colonies for the year 1898.

The appointment of Protector of Emigrants was held by Dr. C. Banks throughout the year.

2. During the year emigration to the Seychelles Islands was declared to be lawful, and Mr. A. C. Stewart was appointed by this Government as Emigration Agent at Calcutta for that Colony. A new edition was issued of the Rules relating to colonial emigration.

3. As in the two previous years, 1896 and 1897, there were six agencies at work, namely, five British and one Dutch, but the coolies which were requisitioned for Jamaica could not be despatched till February 1899, owing to

Requisition and despatch of labourers.



the difficulty experienced in recruitment. The following table shows the demand and supply of adult labour in the year under review as compared with the year 1897;—

NAME OF COLONY.	1897.		1898.	
	Indent.	Supply.	Indent.	Supply.
1	2	3	4	5
Demerara ... ..	1,200	1,149	2,400	2,301
Trinidad ... ..	1,700	1,800	1,200	1,225
Jamaica ... ..	.....	.....	690	Nil
				(623 were supplied in February 1899).
Mauritius ... ..	240	292	.....	.....
Natal ... ..	1,994	2,850	908	1,358
Fiji ... ..	1,300	1,287	560	560
Surinam ... ..	590	.....	600	590
Total ... ..	7,024	7,378	6,358	6,034

4. The terms on which emigrants were engaged during 1898 for Demerara and Jamaica were altered as to return passages; for Trinidad the alterations concerned the duration of work, period of indenture, classification of emigrants, wages, rations, and return passages. None of these changes were in favour of the emigrants. For the other colonies the terms on which emigrants were engaged remained the same as in 1897.

5. Of the 701 licenses granted to recruiters, 27 were subsequently cancelled for various causes. During the period under review 9,334 emigrants were registered as against 12,315 in 1897. The decrease is, no doubt rightly, ascribed to the greater prosperity of the agricultural population and the abundance and cheapness of food-supplies. Of the number recruited during the year, 6 per cent. were obtained in Bengal, 7 per cent. in Bihar, 55 per cent. in the North-Western Provinces, and 32 per cent. in Oudh, as against 9, 10, 56, and 24 per cent., respectively, in the previous year.

6. Of the 9,487 emigrants including 153 remaining from the previous year, (accommodated in the sub-depôts), 1,492 or 16 per cent. did not start for Calcutta, while 7,439 or 79 per cent. of those recruited actually reached Calcutta; 258 remained in the sub-depôts at the close of the year.

Altogether 8,116 emigrants were accommodated in Calcutta, including 667 remaining from the previous year. Of these, 663 were rejected as unfit, 152 deserted, 13 died, 470 were discharged for various reasons, and 6,223 or about 77 per cent. were despatched to the colonies, leaving 595 in two of the depôts at the close of the year for subsequent disposal.

Of the number despatched, 5,350 were Hindus and 873 Muhammadans.

The percentage under the head of "Rejected as unfit" has risen from 7.56 in the previous year to 8.16 in 1898, and the Protector's attention is drawn to the request made in paragraph 6 of the Resolution of this Government on his Report for the year 1897 that special attention should be paid to the matter of awarding compensation to persons who are brought down to Calcutta at great inconvenience to themselves and then rejected as unfit. A report of what has been done to meet the orders of Government should be submitted at a very early date.

7. The total number admitted into hospitals was 337, of whom 13 died, as compared with 489 admissions and 26 deaths in 1897.

8. Of the emigrants who were embarked, 38 per cent. were for Demerara, 20 per cent. for Trinidad, 22 per cent. for Natal, 9 per cent. for Fiji, and 10 per cent. for Surinam.

There were 8 sailing ships and 4 steamers engaged to convey the emigrants, as against 7 and 9, respectively, in the previous year; the average number carried on each being 518 as compared with 474 in 1897. The four steamers conveyed emigrants to Natal only. The duration of the voyage varied from 22 days to Natal, to 120 days to Demerara; the average duration being 73 days as against 52 in 1897.

The aggregate mortality on the various voyages was 27 as against 58 in 1897. The largest number of deaths (5) occurred on the *S.S. Umzanto*, bound to Natal, and was due to an epidemic of influenza associated with pneumonia. Though there was a considerable diminution in the number of steamers engaged in the emigration trade it is satisfactory to note that there was a marked decrease in the death-rate. This cannot, however, be looked on as anything but a remarkable exception to the general rule that the speedier the voyage the less the sickness *en route*.

9. During the year under report 7 colonies returned emigrants to India as against 6 in 1897, the number being 3,502 as against 3,750 in the previous year.

There were 8 births on the return voyage, and 66 or 1.88 per cent. of deaths as against 95 or 2.53 per cent. in 1897—again a satisfactory feature of the emigration returns of the year.

The following table shows the total number of emigrants who returned from each of the colonies during the year under review, the aggregate savings, and the average saving per head :—

COLONIES.	Number of souls embarked at colony.	SAVINGS.	
		Aggregate.	Average amount on the number embarked, columns 2 and 3.
1	2	3	4
		Rs. A. P.	Rs. A. P.
Demerara ...	1,558	2,14,403 4 2	137 9 9
Trinidad ...	747	1,06,061 11 10	141 15 8
Mauritius ...	433	6,451 0 0	14 14 4
Natal ...	116	18,051 2 3	155 9 9
Fiji ..	393	90,337 14 0	229 13 10
Surinam ...	213	36,390 13 0	170 13 6
Guadeloupe ...	42	3,391 7 3	80 11 11
Total ...	3,502	4,75,087 4 6	135 10 7

These figures are of some value and interest, but the Lieutenant-Governor was surprised to find in the course of some enquiries last spring how greatly the savings of emigrants in the same ship varied, and how large was the number of those who came home with practically no savings at all. As long as some men are thrifty and some are not, there must be variations of the sort, but he had hoped to find a more uniform standard of prosperity among returning emigrants than these enquiries disclosed. Dr. Banks has the comfort of the emigrants constantly at heart, but it is necessary that he and the Government should know more than they do about the prospects the several colonies hold out. To this end the Lieutenant-Governor would be glad if the Protector would continue these enquiries in all returning ships to ascertain what proportion has not saved, and so far as he can, the reasons that have led to failure.

10. In consequence of remarks to the same purport last year, the Protector of Emigrants has prepared the following curious table:—

NAME OF COLONY.	Total number of the resident Indian population in colony at end of 1897.	Number of immigrants who arrived in, or were on their way to, the colony during 1898.	IMMIGRANTS RETURNED TO INDIA DURING 1898.		Savings of the total number of immigrants resident in the colony at end of 1897.	Average savings per head of immigrants resident in the colony at end of 1897.	REMARKS.
			Number.	Average savings per head.			
1	2	3	4	5	6	7	8
Demerara	116,633	2,380	1,558	Rs. A. P. 137 9 9	2 S. D. 164,403 7 7	£ S. D. 1 8 2	The entries in column 6 represent only the ascertained savings of the immigrants. Loans to shopkeepers and others, and investments in cattle and farms, probably account for a large portion of their actual savings.
Trinidad	84,057	1,268	747	141 15 8	89,378 6 8	1 1 3	
Mauritius	280,542	.....	433	14 14 4	287,368 16 0	0 19 9	
Natal	54,561	1,390	116	155 9 9	20,944 15 0	0 7 8	
Fiji	11,969	567	304	229 13 10	19,423 5 4	1 12 5	
Jamaica	14,679	.....	.....	.....	22,231 6 4	1 11 6	
St. Lucia	153	.....	.....	.....	25 11 3	0 3 6	
Surinam	9,238	618	213	170 13 6	19,410 17 6	2 1 11	
Reunion	16,966	.....	.....	.....	7,335 6 10	0 9 1	
Guadeloupe	16,390	.....	43	80 11 11	3,190 5 5	0 4 1	

It cannot be said that this compilation adds much to the information on the matter. The returns of their savings made by the emigrants in the several colonies are probably most fragmentary. If they are to be believed, Mauritius pays the emigrant very well, and it is only those who completely fail, who ever leave it. But it is through inconsistencies of the kind that the Protector will be guided in his enquiries, and the Lieutenant-Governor trusts that information will thus be gradually accumulated of some real value as to the relative advantages of the different colonies. He notes for the meantime, that though the Protector does not consider that any reliable conclusions can be drawn from the figures in this and the preceding statement, he regards the position and prospects of the resident immigrants in Fiji and in the West Indian colonies as being the most favourable.

11. The aggregate number of estates belonging to emigrants under administration was 614, valued at Rs. 60,535-2-6. Of these, 457 estates, valued at Rs. 35,254-5-9, were finally administered, the sum of Rs. 21,505-9-4 having been paid to the heirs in respect of 233 estates, while the sum of Rs. 13,748-12-5, standing at the credit of the remaining 224 estates, lapsed to the Indian and Colonial Governments concerned, owing, in some cases, to absence of heirs and in others to the impossibility of tracing them under the false descriptive particulars furnished by the emigrants at the time of registration. Besides the final disposal of the above 457 estates, heirs were traced in respect of 36 estates, valued at Rs. 11,287-9, and the sums due will be paid. Enquiries for heirs were therefore completed in respect of 493 estates, or 80 per cent. of the total number of estates under administration as against 381 estates or 58 per cent. in 1897. Enquiries regarding the remaining 121 estates, valued at Rs. 13,993-3-9, had not been completed by the close of the year. The Protector acknowledges the valuable assistance rendered by District Officers in connection with the tracing of relatives of deceased emigrants.

12. The receipts amounted to Rs. 18,692, showing a reduction of Rs. 5,811-11-10, as compared with those of the previous year, while the charges amounted to Rs. 29,059-10-6, being an increase of Rs. 672-13-11. The year closed with a deficit of Rs. 10,367-10-6, due chiefly to the smaller number of emigrants having been despatched to the colonies than in the previous year.

13. The thanks of Government are due to Dr. Banks for the manner in which he performed his duties as Protector of Emigrants during the year under report.

By order of the Lieutenant-Governor of Bengal,

F. A. SLACK,

Offg. Secretary to the Govt. of Bengal.

SYSTEM OF VERNACULAR EDUCATION IN THE CENTRAL PROVINCES.

GENERAL DEPARTMENT—EDUCATION.

RESOLUTION—No. 2003.

Calcutta, the 11th July 1899.

THE following careful and interesting report on the system of Vernacular Education in the Central Provinces submitted by Mr. Alexander Pedler, F.R.S., now Director of Public Instruction, Bengal, is published for general information, with reference to Government Resolution No. 1921, dated the 1st July 1899, concerning the question of remodelling the existing system of Vernacular Education, published in the *Calcutta Gazette* of the 5th July 1899.

By order of the Lieutenant-Governor of Bengal,

F. A. SLACK,

Offg. Secy. to the Govt. of Bengal.

SHORT REPORT

ON THE

SYSTEM OF VERNACULAR EDUCATION

IN THE

CENTRAL PROVINCES

BY

ALEXANDER PEDLER, F. R. S., &c.

Preliminary description and general consideration of the system.

AFTER a few preliminary enquiries at Nagpur I decided to investigate the conditions of vernacular (primary and middle school) education in the Central Provinces for the past 18 years only. In this I was guided by the fact that up to about the year 1880, no attempt was apparently made to introduce any of what may be called the modern ideas and methods in educational matters into the system employed. Hence, it did not appear necessary to go back beyond this date in my enquiry. From 1880, however, the ruling authorities in the Central Provinces appear to have appreciated the fact that modern methods had begun to differ largely from the older style of education, and they hence began to introduce changes.

They first took up the necessity of physical training in schools in addition to the ordinary subjects of mental training, and from about this date (1880) drill began to be taught in schools, and it has been since steadily encouraged, while more lately it has been reduced to a complete system. At first apparently the methods of drill were partly on European models, but it has been found that the native systems of drill and exercise are more popular, and hence a book has been prepared and issued (in 1897-98) called the *Deshi Kasarat*, which is the manual for drill in all primary and vernacular schools in the Central Provinces.

I had personal opportunities of witnessing the system of drill in six schools (five boys' and one girls'), and I confess to have been very much surprised by the systematic way in which the drill was done and by the excellence of the exercises. In the girls' school\*

\* Under the charge of an English Missionary Lady.

I may mention the system was more or less European, but in the case of the boys' it was purely native drill and gymnastics.

It appeared to me that this very complete and definite system of drill has had a most excellent effect on the tone of the schools, and also on the physique of the children. I am also of opinion that this drill has given to the schools a discipline which is very much superior to that found in the schools of Bengal. The pupils were smartly obedient to orders, both at drill and also in the school classes, and the attitudes and motions of the body and limbs in the

drill were quickly and accurately gone through in a most systematic manner in obedience to brief commands. In passing, I may point out that the system introduced in the Central Provinces has no connection or resemblance to military drill, but that it is only intended to exercise thoroughly the various muscles and parts of the body. No apparatus is required for this drill, and hence there has been and would be absolutely no expense in its introduction into schools.

I need hardly point out the very great influence which such a system of drill has upon discipline. Drill is indeed one of the best, if not quite the best, means of teaching and enforcing discipline and obedience in schools, but in the schools in Bengal this valuable aid to sound education has been to a great extent disregarded and neglected, or at all events it has never been really encouraged to the extent it should have been.

As this is a portion of education which costs nothing, and can be introduced with practically no preliminary arrangements or training, there does not seem to be any reason why a system of drill should not at once be made compulsory in Bengal in all schools from the primary stage upwards. All that would be necessary would be to prepare a work or description of the drill to be used, like the *Deshi Kasarat* employed in the Central Provinces, and to circulate it to all schools. The cost of the *Deshi Kasarat* is 1 anna 6 pies only.

Arrangements having been made to improve the discipline and physical condition of the pupils, a few years later the authorities of the Central Provinces introduced changes with the object of improving the educational methods used in schools, and in this they kept in view that it is necessary in education not only to train the memory and reasoning powers, but also to train habits of observation, thought and inference, and also to train the hand and eye. Hence about 1887, in addition to the ordinary subjects of school teaching, the subject of drawing (hand and eye training) was introduced in all schools, and this was followed in 1888-89 by the introduction of the methods of kindergarten teaching, object-lesson teaching, science teaching (physical science in middle town schools and agriculture in rural primary schools) and also by the introduction of manual training.

The subjects which were taught under the head of manual training were (1) clay modelling, (2) paper-cutting and pattern-forming, (3) cardboard work, and (4) wood work or slojd. As before stated, manual training in schools was introduced as a compulsory subject by Sir A. Mackenzie in 1888-89, but in the year 1891-92 it was specially relegated to the class of optional subjects, and to a great extent neglected and almost abolished under the orders of Sir A. P. McDonnell. Hence this subject was scarcely given a fair trial, as it was only taught for two years; but the evidence showed that clay modelling and paper-cutting, &c., were distinctly popular and useful, though cardboard work and wood work were less congenial. The opinion of the Inspector of Schools, who was deputed to show me the educational system of the Central Provinces, was to the effect that though it might have been a little premature to introduce manual training broadcast and compulsorily into the schools in 1888-89, yet its almost practical abolition in 1891-92, when it had really begun to gain a hold on the schools, was a great mistake, and decidedly retrograde in character.

Though manual training of the forms mentioned has almost disappeared from the ordinary schools, yet it is still taught in the normal schools for teachers, and I saw good paper-cutting, pattern-forming, &c., in progress in the Nagpur Normal School. I also saw the remains of manual training work in the village, &c., schools, and in some of them the clay objects modelled, &c., are still kept for inspection and are fairly good.

The remaining four subjects, which may be taken as being modern subjects or methods of education, namely, drawing, kindergarten teaching, object-lesson teaching, and science teaching (physical science and agriculture), are still in use in many, if not almost all, the vernacular schools, and on the whole the results obtained appear to be decidedly satisfactory. The details of such teaching will be included under the description of the work done in the various classes of schools in a later section of this report.

About 1894 complaints appear to have been received to the effect that the number of subjects to be learned, and the length of the instruction in vernacular schools had become too great, and the plan was then adopted of dividing the subjects into compulsory and optional, and into subjects to be taken by



town schools and those in rural districts. In the case of the schools away from towns, &c., they are practically almost all of the upper primary class, and for the primary rural schools the compulsory subjects now in use are reading, writing, arithmetic, and geography, and the optional subjects grammar, object lessons or elementary science, kindergarten occupations, manual training, and drawing. In addition, in the readers which are employed under the head of reading in classes III and IV, agriculture and the elements of science necessary for the explanation of the agricultural facts, as well as elementary sanitation, are included, and these do not, therefore, appear as separate subjects in the curriculum, for they are part of the compulsory course. In the case of the optional subjects mentioned, practically all except manual training are now taught in almost all schools.

In connection with the study of agriculture, it should be mentioned that in all the schools I saw where agriculture was taught, there were school gardens attached. These gardens are divided into plots, which have to be kept in order usually by two boys working jointly. Most of these school gardens were really very good, and were well kept up.

The schools situated within municipalities and towns are usually of the class of middle schools, and the curriculum for the middle schools is slightly different from that detailed above. In the classes up to and including class IV, corresponding to the upper primary standard, drawing is compulsory. In addition to reading, writing, arithmetic, and geography, object-lessons are also compulsory in the first three classes, while for class IV to VI completing the middle course, a certain amount of science is taught, the text-book in classes V and VI being a translation of Balfour Stewart's *Primer of Physics*. In class IV or the upper primary class an elementary knowledge of animals and plants and of metals and of other substances used in the arts and manufactures is required.

The optional subjects for the vernacular middle town schools are kindergarten occupations, manual training, drawing, surveying, and mensuration in classes V and VI, history in classes III to VI, and geometry and algebra in class VI. Sanitation and agriculture are again included in the ordinary reading lessons in the text-books prescribed for middle schools, but in the case of agriculture it is only intended to be taken in urban schools. Of the optional subjects, kindergarten and drawing are practically always taken up, while the other subjects which are read in the schools vary under different local circumstances.

In the case of vernacular girls' schools needle-work is compulsory in addition to reading, writing, arithmetic, and geography, while the optional subjects are grammar, object-lessons or elementary science, kindergarten occupations, manual training and drawing. Sanitation is again included in the readers used, and is thus a compulsory subject. In the girls' schools the needle-work is said to be good, and among optional subjects kindergarten is well taught.

The method of the introduction of the new subjects into the schools appears to have been simplicity itself, inasmuch as a simple departmental order was issued that such subjects should be taught in the future in all schools under the authority of Government and in those receiving public aid. At the same time, the subjects were introduced into the normal schools, so as to gradually provide trained teachers, and from year to year a considerable number of mufassal teachers were called in from their schools to receive special courses of instruction at the normal and other training schools.

As this method had the disadvantage that for a time a good deal of the teaching would have been given by persons not actually trained or instructed in such subjects, it was arranged to have conferences of Inspectors and Deputy-Inspectors and of masters, district by district, each conference lasting about three weeks, at which such subjects as kindergarten work, object-lessons, drawing, manual training, sloyd, &c., were thoroughly explained to the masters to enable them to pass on the instruction to the schools. At a later date also agricultural conferences for enforcing the teaching of simple agricultural facts were held among the masters, &c.

The methods of supplying trained teachers in the schools in the Central Provinces are, however, much more satisfactory than in Bengal. No person is now allowed to commence a career as a paid public teacher or would be

allowed as a new teacher to present pupils for a reward from public money, unless he has passed the departmental examination or tests as a teacher. The school teachers are naturally when compared

\* There are only about 2,200 schools, I believe, in the Central Provinces.

with those in Bengal few in number,\* but the training schools in the Central Provinces have been steadily turning out a good supply of trained teachers, so that at the present time about 75 per cent. of the masters in the primary schools have actually passed the departmental test as qualified teachers. The details as to the methods of training teachers and the courses followed in normal schools will also be referred to later on.

It is probable that at first the teaching of the new subjects was decidedly poor, but owing to the steps which have been taken, it appeared to me that the teaching was now carried on fairly satisfactorily, and at all events that the teaching was far better than in the great majority of schools in Bengal.

A very important point to be considered with regard to the modernising of the education in the Central Provinces is its cost. In certain previous discussions which have been laid before the Bengal Government when the Central Provinces' system was compared with that in Bengal, a very strong opinion was put forward that the modern system of education was very costly. I therefore made very particular enquiries on the subject of the expenditure to try to ascertain whether the introduction of the modern subjects and system had been attended by an increase in the cost of education per head of pupils. It appears to be true, and I was assured that such was absolutely the case, that practically no increased cost has been thus incurred, and that it is practically as cheap to educate by modern methods as by those which are more or less antiquated. It is desirable that this point should be made perfectly clear, and I therefore asked for several sets of statistics from the Central Provinces bearing on this fact.

I much regret to state that though this report has been somewhat delayed, the statistics have by a misunderstanding not been supplied. The report is therefore submitted without them, and a supplementary note can be added later on if found necessary.

The following figures however which are extracted from the annual reports on education in the Central Provinces may be considered to prove this point sufficiently clearly. The figures relate to the average cost of education of each primary pupil year by year in all the schools in the Central Provinces, and show in the first column the total cost of education, and in the second the cost to Government of each such primary pupil.

*Cost of educating a pupil in the Primary Schools in the Central Provinces.*

YEAR.	Total cost of educating each pupil.	Cost to Government.
1	2	3
	Rs. A. P.	Rs. A. P.
1886	3 4 8	0 12 5
1887	3 6 7	0 13 2
1888	3 6 9	0 15 8
1888-89	3 5 7	0 15 3
1889-90	3 4 11	0 15 10
1890-91	3 6 5	0 14 2
1891-92	3 5 8	0 13 4
1892-93	2 13 1	0 8 8
1893-94	2 11 10	0 11 9
1894-95	2 12 7	0 10 4
1895-96	2 12 10	0 10 2
1896-97	2 14 5	.....

\* Not given in quinquennial report for 1896-97.

Indeed it might be almost possible from these figures to argue that education by modern methods is, if anything, less costly than by the older methods.

#### DETAILS OF WORK IN SCHOOLS.

The following are the classes of schools which were inspected and considered on my visit to the Central Provinces:—

Primary schools,	Girls' (primary) schools,
Middle       "	Normal or training schools,
Agricultural training schools,	

all of which form part of the scheme for vernacular education in that province.

Having given previously a brief outline of the changes which have been made in the system, it is now proposed to state briefly a few facts with reference to the courses of instruction followed in each of the classes of schools, and to point out more in detail those portions of the work in which the methods followed differ considerably from those in use in Bengal, and which appear to be improvements on the Bengal system.

In the bare outlines of the scheme of education, the system followed in the Central Provinces shows great similarity to that existing in Bengal. Thus the primary education is divided into two stages—

(1) The Lower Primary.

(2) The Upper Primary.

But there is this difference that while in Bengal the great majority of schools are of the lower primary class, and having started as lower primary schools remain as such, in the Central Provinces if a school is started as one of the lower primary standard, every effort is made to raise it quickly to the upper primary standard.

Here undoubtedly the advantage rests with the Central Provinces' method.

There is, however, in Bengal a rather greater difference between the lower primary and upper primary standards than is the case in the Central Provinces.

In lower primary schools in Bengal we have the classes "B Standard" and "A Standard" and the lower primary class. These exactly correspond to the three classes belonging to the lower primary school in the Central Provinces. In Bengal there is above the lower primary class a higher class (class II) and then the upper primary class, but in the Central Provinces the pupils of class III, the lower primary class, pass at once into class IV or to the upper primary standard. That is in Bengal it takes five years to reach the upper primary standard while in the Central Provinces it takes only four years.

Above the upper primary standard in Bengal we have the second class of a middle school and then the first class in the middle school standard, which is exactly parallel to the system in the Central Provinces, where the V and VI classes rise to the middle standard. Usually, as in Bengal, promotions are made once a year, and thus while six years are given in the Central Provinces to reach the middle stage of education, seven years are usually occupied in the Bengal schools.

The standards of work in middle and primary standards of boys' vernacular schools and also in girls' vernacular schools (which usually only rise up to the upper primary standard), are shown in the following tabular statement. This is the school curriculum as defined in the Central Provinces Education Manual, slightly abridged by the omission of the reading courses in the various vernacular languages met with in the schools.

**SUMMARY OF THE CURRICULUM FOR VERNACULAR MIDDLE (TOWN) SCHOOLS.  
CENTRAL PROVINCES.**

	CLASS I. One year's course.	CLASS II. One year's course.	CLASS III. One year's course.	CLASS IV. One year's course.	CLASS V. One year's course.	CLASS VI. One year's course.
1	2	3	4	5	6	7
	<b>COMPULSORY SUBJECTS.</b>					
1. Drawing (optional after class IV).	Free-hand on slates, straight lines and their combinations, squares, triangles, oblongs.	Free-hand on slates, straight lines and their combinations, a more advanced course.	Free-hand on paper, curved lines and their combinations, easy familiar objects from copies.	Free-hand on paper, leaves, flowers, familiar objects from copies.	.....	.....
2. Reading and Grammar.	The alphabet and reading sheets in Hindi, Marathi, Uriya, Urdu and Telugu, supplied to Departmental schools. Departmental 1st book in various vernaculars.  Recitation of 10 lines of easy verse.	Departmental Book II in various vernaculars.  Recitation of 30 lines of easy verse.  Subject and predicate. To be taught in connection with the reading lesson.	Departmental Book III in various vernaculars.  Recitation of 50 lines of verse, with explanation of the meaning.  Subject, predicate, object, nouns, pronouns, adjectives and verbs. To be taught in connection with the reading lesson.	Departmental Book IV. (Revised) in various vernaculars.  Recitation of 80 lines of poetry with explanation of the subject-matter and allusions.  Analysis of simple sentences, and parts of speech. To be taught in connection with the reading lesson.	The prose part and easy poetry of 4th Departmental Book (old edition) in various vernaculars.  Recitation of 100 lines of poetry, with explanation of the subject-matter and allusions.  The elements of grammar as in any grammar used in the Upper Primary Class of a Government school. Prose to be omitted. Analysis. To be taught in connection with the reading lesson.	Fourth Departmental Book (old edition), the whole, and Ramayan Aranya or Ayodhya-kand in various vernaculars.  Recitation of 140 lines of poetry, with explanation of the subject-matter and allusions.  Syntax and prosody. Rules of Sandhi and Samas. Easy derivation to be taught in connection with the reading lesson.
3. Writing and spelling.	Large hand on slates. Letters and words from the reading sheets. Copying words and sentences from the reader, and dictation.	Large hand on paper. To write to dictation from the reader in use.	Text or medium size on paper.  To write to dictation from the reader in use.	Small hand.  To write to dictation from the reader in use.	Small hand. Dictation from the reading book in use.  To write from memory the subject-matter of any short story from the reader in use, or to write a short letter.  Books of school exercises to be exhibited, each page to be dated and signed by the pupil.	Small hand. Dictation from the reading book in use.  To write a short letter descriptive of some place known to the pupil, or of some event within his experience.  Books of school exercises to be exhibited, each page to be dated and signed by the pupil.
4. Arithmetic	(1) Instruction in the subject to be by means of the ball-frame or with counters, the scholars thus being taught by sight and touch. Notation and numeration to 1,000. The multiplication tables to 10x10. Simple addition and subtraction.  2) Mental exercises in the addition and subtraction of pice, annas and rupees, the totals not to exceed Rs. 5.	(1) Notation and numeration to 10,000. The four simple rules. Multipliers and divisors not to exceed two figures. Multiplication tables to 16 times and fractional tables to 24. Tables of weights and measures in common use to be learnt and applied.  (2) Mental exercises in the addition and subtraction of pice, annas and rupees, the totals not to exceed Rs. 10.	(1) Simple and compound rules. Reduction.  (2) Mental application of the simple and compound rules and of fractional tables to any bazar problems.	(1) Simple proportion, L. C. M. and G. C. M., vulgar fractions, simple interest, the addition, subtraction, multiplication and division of easy decimals, the conversion of vulgar fractions into decimals and vice versa. Easy problems.  (2) Mental Arithmetic. Exercises in the ordinary rules for mental Arithmetic as known in the bazar.	Simple and compound proportion. Vulgar and decimal fractions. Practice, simple interest, square root. Problems.  Mental arithmetic; a more advanced course.	The whole (excluding stocks, exchange and cube root).

	CLASS I. One year's course.	CLASS II. One year's course.	CLASS III. One year's course.	CLASS IV. One year's course.	CLASS V. One year's course.	CLASS VI. One year's course.
1	2	3	4	5	6	7
5. Object lessons or elementary science.	Common objects such as familiar animals, plants, metals and substances employed in ordinary life. (2nd half year).	As in Class I; a more advanced course.	As in Class II; a more advanced course.	An elementary knowledge of animals and plants with special reference to agriculture, and of metals and other substances employed in the arts and manufactures carried on in the district in which the school is situated.	The elements of physical science as in Balfour Stewart's Primer or other suitable text-book, viz., definitions, the chief forces of nature, gravity, the three states of matter, properties of solids, liquids and gases, moving bodies.	Revision of the Primer vibrating bodies, heated bodies, electrified bodies.
Geography ...	.....	To explain a plan of the school-room which has been drawn to scale from measurements taken by the children; children to mark on the plan the position of the benches, &c. The 4 cardinal points, a knowledge of the town or village in which the school is situated studied from a map of the locality.	Special knowledge of the geography of the district in which the school is situated, together with ability to point out on the map, the districts, towns and rivers of the Central Provinces.	Geography of the Central Provinces and of India. Outlines of India and the world, the latter with special reference to the British Empire. Map of village and neighbourhood. Size and shape of the Earth. The causes of day and night. Diurnal motion of the Earth.	The geography of the world with special reference to Asia and India. Latitude and longitude, annual motion of the Earth, the seasons, the tides, the monsoons and eclipses to be understood.	(1) The world, with special reference to the British Empire. (2) Map of Europe and the British Isles to be drawn. (3) Elementary Physical Geography, wind, rain, climate, storms, phases of the moon, the solar system.
1. Kindergarten occupations and manual training.	The first 4 occupations.	The first 6 occupations.	OPTIONAL SUBJECTS.			
			1. Modelling in clay, Rick's Book I, Chapter X, pages 50-55.  2. Paper folding, cutting and mounting.	1. Exercises in wood-work with the knife, Rick's Book II, Chapter V, pp. 34, 35, or  2. Modelling in clay, Rick's Book I, Chapter X, p. 66, and models of natural objects proposed by the teacher, or  3. Drawing, cutting and mounting, Rick's Book I, Chapter V.	1. Wood-work, Rick's Book II, Chapter V, paragraphs 35-37, and Chapter VI, paragraphs 41-43, or  2. Folding, cutting, mounting, designing in form and colour, Rick's Book I, paragraphs 41-45, and similar exercises. Drawing and cutting geometrical forms, Book I, Chapter VIII, or  3. Drawing, colouring, &c., Rick's Book I, Chapter VI, or  4. Modelling in clay as in Class IV, with greater proficiency.	1. Wood-work, Rick's Book II, Chapter VII, paragraphs 46-53, or  2. Folding, cutting, mounting and designing in form and colour, Rick's Book I, Chapter VII, paragraph 46 and similar exercises, or  3. Modelling in card-board, Rick's Book I, Chapter IX, pages 54-59, or  4. Modelling in clay as in Class V, with greater proficiency.
2. Drawing ...	.....	.....	.....	.....	Free-hand, as in Class IV, a more advanced course. Model drawing. Geometrical drawing. Burchett problems 1 to 39 and problems 33 and 37.	Free-hand and model drawing as in Class V, a more advanced course. Perspective (linear). Geometrical drawing. The construction of the ellipse by means of the trammel. Burchett Revision, and problems 1 to 105, cutting numbers 6, 13, 16, 24, 35, 36, 39, 41, 43, 44, 45, 48, 50, 51, 52, 55, 57, 58, 59, and 60.
Mensuration ...	.....	.....	.....	.....	Surfaces ...	Surfaces and solids.



	CLASS I. One year's course.	CLASS II. One year's course.	CLASS III. One year's course.	CLASS IV. One year's course.	CLASS V. One year's course.	CLASS VI. One year's course.
1	2	3	4	5	6	7
4. Geometry ...	....	....	....	....	....	26 Propositions of the 1st book of Euclid, with easy exercises.
5. Algebra ...	....	....	....	....	....	First four rules. Factors, L. C. M., and G. C. M. Easy fractions, and simple equations.
6. History ...	....	....	....	India, the English period.	The main facts of the History of India.	Hunter's History of India, or other similar Text book, the whole.
7. Surveying (where practicable).	....	....	....	....	With plain-table and cross-staff.	With plain-table and cross-staff.
8. Sanitation ...	....	....	....	Taught from lessons in 3rd and 4th Readers.	....	....
9. Agriculture (in urban schools).	....	....	....	Taught from lessons in 3rd and 4th Readers.	Taught from lessons in 3rd and 4th Readers.	Taught from lessons in 3rd and 4th Readers.

NOTE.—(1). Not more than three optional subjects can be taken.

(2). *Sanitation* and *Agriculture* appear as optional subjects in the curriculum of Middle (Town) Schools; they are taught as part of the ordinary reading lessons from the 3rd and 4th revised Readers, in which are incorporated Fuller's "Agricultural Primer" and "The Way to Health."

### SUMMARY OF THE CURRICULUM FOR PRIMARY (RURAL) SCHOOLS.

#### CENTRAL PROVINCES.

	CLASS I. One year's course.	CLASS II. One year's course.	CLASS III. One year's course.	CLASS IV. One year's course.
1	2	3	4	5
1. Reading ...	<p style="text-align: center;">COMPULSORY SUBJECTS.</p> <p>The alphabet and reading sheets in Hindi, Marathi, Uriya, Urdu and Telugu, supplied to Departmental schools.</p> <p>Departmental 1st book in various vernaculars.</p> <p>Recitation of 20 lines of easy verse.</p>			
2. Writing and spelling ...	Large hand on slates, letters and words from the reading sheets. Copying words and sentences from the Reader, and dictation.	Large hand on paper. To write to dictation from the Reader in use.	Text or medium size on paper.  To write to dictation from the Reader in use.	Small hand.  To write to dictation from the Reader in use.
3. Arithmetic ...	<p>(1) Instruction in the subject to be by means of the ball-frame or with cowries, the scholars thus being taught by sight and touch. Notation and numeration to 1,000. The multiplication tables to 10×10. Simple addition and subtraction.</p> <p>(2) Mental exercises in the addition and subtraction of pice, annas and rupees, the totals not to exceed Rs. 5.</p>	<p>(1) Notation and numeration to 10,000. The 4 simple rules. Multipliers and divisors not to exceed 2 figures. Multiplication tables to 16 times and fractional tables to 24. Tables of weights and measures in common use to be learnt and applied.</p> <p>(2) Mental exercises in the addition and subtraction of pice, annas and rupees, the totals not to exceed Rs. 10.</p>	<p>(1) Simple and compound rules. Reduction.</p> <p>(2) Mental application of the simple and compound rules and of fractional tables to easy bazar problems.</p>	<p>(1) Simple proportion, L. C. M. &amp; G. C. M., vulgar fractions. Simple interest. Easy problems.</p> <p>(2) Mental Arithmetic. Exercises in the ordinary rules for Mental Arithmetic as known in the bazar.</p>

	CLASS I. One year's course.	CLASS II. One year's course.	CLASS III. One year's course.	CLASS IV. One year's course.
1	2	3	4	5
4. Geography ...	.....	.....	Definitions—Outlines of the Central Provinces. Map of school-room.	Revision—Geography of the Central Provinces. Outlines of India and the world. The latter with special reference to the British Empire.  Map of village and neighbourhood. Size and shape of the earth. The causes of day and night.
1. Grammar ...	.....	OPTIONAL SUBJECTS.		Analysis of simple sentences. Inflection of nouns, pronouns, and adjectives.
			Parts of speech.	
2. Object lessons or Elementary Science.	Common objects, such as familiar animals, plants, metals, and substances employed in ordinary life. (2nd half-year.)	As in Class I; a more advanced course.	As in Class II; a more advanced course.	An elementary knowledge of animals and plants, with special reference to agriculture, and of metals and other substances employed in the arts and manufactures carried on in the district in which the school is situated.
3. Kindergarten occupations and manual training.	The first 4 occupations ...	The first 6 occupations ...	(1) Modelling in clay, Rick's Book I, Chapter X, pages 59-65. (2) Paper folding, cutting and mounting.	(1) Exercises in wood-work with the knife, Rick's Book II, Chapter V, pages 34, 35, or (2) Modelling in clay, Rick's Book I, Chapter X, p. 66, and models of natural objects, proposed by the teacher or (3) Drawing, cutting, and mounting, Rick's Book I, Chapter V.
4. Drawing ...	Free-hand on slates, straight lines and their combinations, squares, triangles, oblongs.	Free-hand on slates, straight lines and their combinations, a more advanced course.	Free-hand on paper, curved lines and their combinations, easy familiar objects from copies.	Free-hand on paper, leaves, flowers, Familiar objects from copies.

NOTE—(1). Not more than two optional subjects can be taken.

(2). Fuller's "Agricultural Primer" and "The Way to Health," having been incorporated in the 3rd and 4th Revised Readers, Agriculture and Sanitation are taught as part of the ordinary reading lessons, and do not appear as separate subjects in the curriculum.

### SUMMARY OF THE CURRICULUM FOR VERNACULAR SCHOOLS (FOR GIRLS).

#### CENTRAL PROVINCES.

	CLASS I. One year's course.	CLASS II. One year's course.	CLASS III. One year's course.	CLASS IV. One year's course.	CLASS V. One year's course.
1	2	3	4	5	6
1. Reading and Grammar.	COMPULSORY SUBJECTS.				
	The alphabet and reading sheets in Hindi, Marathi, Uriya, Urdu and Telugu, supplied to Departmental schools.				
	Departmental 1st book in various vernaculars.	Departmental book II, in various vernaculars.	Departmental book III, in various vernaculars.	Departmental book IV (Revised), in various vernaculars.	The prose part and easy poetry of 4th Departmental book (old edition), in various vernaculars.
	Recitation of 20 lines of easy verse.	Recitation of 40 lines of easy verse.	Recitation of 60 lines of verse, with explanation of the meaning.	Recitation of 80 lines of poetry with explanation of the subject-matter and allusions.	Recitation of 100 lines of poetry with explanation of the subject-matter and allusions.

	CLASS I. One year's course.	CLASS II. One year's course.	CLASS III. One year's course.	CLASS IV. One year's course.	CLASS V. One year's course.
1	2	3	4	5	6
2. Writing and spelling.	Large hand on plates. Letters and words from the reading sheets. Copying words and sentences from the Reader and dictation.	Large hand on paper. To write to dictation from the Reader in use.	Text or medium size on paper.  To write to dictation from the Reader in use.	Small hand  To write to dictation from the Reader in use.	Small hand.  Dictation from the reading book in use. To write from memory the subject-matter of any short story from the Reader in use, or to write a short letter. Books of school exercises to be exhibited, each page to be dated and signed by the pupil.
3. Arithmetic	(1) Instruction in the subject to be by means of the ball-frame or with counters, the scholars thus being taught by sight and touch. Notation and numeration to 1,000. The multiplication tables to $10 \times 10$ . Simple addition and subtraction.  (2) Mental exercises in the addition and subtraction of pice, annas and rupees, the totals not to exceed Rs. 5.	(1) Notation and numeration to 10,000. The 4 simple rules. Multipliers and divisors not to exceed 2 figures. Multiplication tables to 16 times and fractional tables to $2\frac{1}{2}$ . Tables of weights and measures in common use to be learnt and applied.  (2) Mental exercises in the addition and subtraction of pice, annas and rupees, the totals not to exceed Rs. 10.	(1) Simple and compound rules. Reduction.  (2) Mental application of the simple and compound rules and of fractional tables to easy bazar problems.	(1) Simple proportion, L. C. M. and G. C. M., easy vulgar fractions. Easy problems.  (2) Mental Arithmetic. Exercises in the ordinary rules for mental arithmetic as known in the bazar.	Simple and compound proportion, vulgar and decimal fractions. Simple interest. Problems.  Mental arithmetic; a more advanced course.
4. Geography	.....	.....	Definitions. Outlines of the Central Provinces and of India. Map of school-room.	Revision - Geography of the Central Provinces and of India. Outlines of India and the World. The latter with special reference to the British Empire. Map of village and neighbourhood. Size and shape of the Earth. The causes of day and night.	The geography of the world with special reference to Asia and India. Latitude and longitude, annual motion of the earth, the seasons, the monsoons, and eclipses to be understood.
Needlework	Threading needles and hemming (to be fixed by the teacher).	Running, stitching and top-sewing (to be fixed by the teacher). Knitting on two needles.	Folling, gathering to sew a child's jacket (fixed by the teacher), to knit a scarf, plain and purl.	Mending, berring-boning, to set and sew a child's jacket, knitting on 4 needles, cross-stitch.	To cut out, fix and sew a petticoat, jacket, bodice, knit socks, copy cross-stitch from a pattern, button-holing.
1. Grammar	.....	.....	OPTIONAL SUBJECTS.  Parts of speech		Analysis of simple sentences. Inflection of nouns, pronouns and adjectives.  The elements of grammar as in any grammar used in the Upper Primary Class. Analysis.
2. Object lessons or Elementary Science.	Common objects, such as familiar animals, plants, metals and substances employed in ordinary life. (2nd half-year.)	As in Class I, a more advanced course.	As in Class II, a more advanced course.	An elementary knowledge of animals and plants with special reference to agriculture, and of metals and other substances employed in the arts and manufactures carried on in the district in which the school is situated.	The elements of physical science as in the Balfour Stewart's Primer or other suitable textbook, viz., definitions, the chief forces of nature, gravity, the three states of matter, properties of solids, liquids and gases, moving bodies.
3. Kindergarten occupations and manual training.	The first 4 occupations.	The first 6 occupations.	1. Paper folding, cutting and mounting.	1. Drawing, cutting and mounting, Rick's Book 1, Chapter V.	1. Folding, cutting, mounting, designing in form and colour, Rick's Book 1, paragraphs 41-45, and similar exercises, or— 2. Drawing, colouring &c., Rick's Book 1, Chapter VI.

	CLASS I. One year's course.	CLASS II. One year's course.	CLASS III. One year's course.	CLASS IV. One year's course.	CLASS V. One year's course.
1	2	3	4	5	6
4. Drawing	Free-hand on slates, straight lines and their combinations, squares, triangles, oblongs.	Free-hand on slates, straight lines and their combinations, a more advanced course.	Free-hand on paper, curved lines and their combinations, easy familiar objects from copies.	Free-hand on paper, leaves, flowers, Familiar objects from copies.	Free-hand as in Class IV, a more advanced course. Model drawing, Geometrical drawing, Burchett Problems I to 30 and Problems 33 and 37.

NOTE 1.—Not more than two optional subjects can be taken.

2.—Sanitation is taught from the reading lessons in the 3rd and 4th revised Readers; the lessons on agriculture should be omitted.

Taking the course up to the Upper Primary and Middle Vernacular standards, the subjects in which the main differences occur between the courses of work in the schools in Bengal and the Central Provinces are the following :—

- (1) Drill, not shown in the printed curriculum.
- (2) Drawing (hand and eye training).
- (3A) Agriculture.
- (3B) Physical Science.
- (4) Kindergarten teaching.
- (5) Object lessons.
- (6) Manual training.

A few remarks may be written on each of these subjects.

1. *Drill*, which is carried on systematically in every class of schools, and which has been attended with most satisfactory results. The text-book of drill and gymnastics, "Deshi Kasarat," in Hindi and other vernaculars was issued in 1897-98.

A brief statement of the nature of the work done in boys' schools will be submitted later on. The actual book is being translated into English, and a few copies of the translation will be printed so that it may be considered by the Committee on Vernacular Text-Books, which is sitting, and the Committee will discuss its suitability for introduction into Bengal schools.

In the case of girls' schools the system of drill followed is different from that in the boys' schools, and instead, perhaps, of using the term drill, it would be more correct to say the girls are practised in action songs and calisthenics. Some of the exercises gone through by the girls were, however, very satisfactory. Practically a very simple modification of the exercises used in an English girls' school would be sufficient for Indian girls' schools. No special book for this appears necessary at present in the case of Bengal schools.

2. *Drawing (hand and eye training)*.—This is a second point in which the Bengal schools might take a wholesome lesson from those in the Central Provinces. In my inspection I found that in some Central Provinces' schools the drawing of boys in the primary classes was fully equal to, and indeed sometimes superior to, the drawings done by boys in Bengal in the first class of zilla schools, and who are presenting themselves in the drawing standard of the Calcutta Entrance Examination.

In the schools in the Central Provinces, ordinary kindergarten drawing is taught in the lowest classes, and from about class III ordinary freehand drawing from copies is practised. In the teaching of drawing in class I or classes I and II, a kindergarten blackboard (ruled in one inch squares) is used in the schools, the cost of which is about Rs. 4, while in the case of drawing from copies, at first the "South Kensington" copies were supplied to the Central Provinces' schools, but these have been replaced by cards with locally prepared lithographic copies of figures, &c., and on the back of these cards the directions or instructions to be given by the teacher, and which are required for the work of copying, are given in the various vernaculars. The cost of these copies (about 30 or 40 in number) is only Re. 1-14. Beyond this there is no extra cost to the school; for in the kindergarten drawing the copies are made on the children's slates, and in the higher drawing the pupils provide their own pencils and drawing-books, the latter costing only one anna each.

There therefore again appears to be every reason why drawing should be introduced into Bengal schools.

3A *Agriculture* is another subject which is highly important in a country like India, and while fairly well taught in an elementary manner in the vernacular schools in the Central Provinces, it is scarcely considered or studied in Bengal schools.

The portions of the readers for the third and fourth classes in the schools in the Central Provinces curriculum, which deal with agriculture, are based on "Fuller's Agricultural Primer adopted for use in elementary schools or classes in the Central Provinces." The following are briefly the subjects which are discussed in this Primer:—

*Lesson or Chapter I.*—The similarity between the growth of animals and plants.

*Lesson II—V.*—The different parts of a plant.

*Lesson VI.*—Plants, like animals, grow by feeding.

*Lesson VII—XV.*—The three chief requisites for successful cultivation—(1) good seed, (2) plant food, (3) careful protection.

*Lesson XVI.*—On agricultural machinery and implements.

*Lesson XVII.*—The management of farm cattle.

*Lesson XVIII.*—The law of landlord and tenant.

There are also certain appendices on common cattle diseases.

In order to ensure that this portion of the teaching is not considered to be simply an oral lesson, only to be committed to memory and not understood, special circulars have been issued to the normal schools for teachers, etc., which detail the nature of the practical teaching which should be attempted by the village school-masters. A free translation into English (with explanatory remarks) of one of the special vernacular agricultural circulars (illustrated by diagrams) is appended, so that it may be clearly seen how far the experimental or practical portion of agricultural work is pushed. Hence it will be seen the teaching of agriculture in the primary schools in the Central Provinces has its practical as well as theoretical side.

KRISHI PRAYAG DARPAN

OR

## A GUIDE TO THE AGRICULTURAL EXPERIMENTS

IN THE

VILLAGE SCHOOLS, CENTRAL PROVINCES.

EXPERIMENTS NOS. 1 AND 2.

*Bottle culture*

*Pictures A and B*

*Apparatus required.*—Two bottles; two corks with a hole in the middle and split on one side up to the middle hole; a few seeds of any grain you want to germinate; a small basin; thin blotting paper; water; manure or soil; wrapping paper.

*Experiment A.*—In the basin supplied place a piece of thin blotting-paper and moisten it with water and then place the seeds on it. Cover the seeds with another piece of blotting paper, also moistened with water. Keep the blotting-paper always moistened with water, and in about four or five days the seeds will germinate and will be soon fit for removal.

Take the bottle and the cork. Introduce the young plant through the slit of the cork into the middle hole of it, and put a little piece of cotton-wool in the hole so that the plant may not fall down or through the hole. Put the cork into the bottle so that the roots of the plant may reach the water in the bottle. Wrap a piece of paper round the bottle, and then keep it in an airy and well lighted place.

Change the water once in two or four days. The plant will grow for a time and then will begin to fade away, and finally will die altogether.

*Experiment B.*—Arrange everything just like in the experiment A, but while changing the water put plant food\* into it.

\* Plant food may thus be prepared:—

Take some fertile soil or good manure (cow-dung manure is best) and place it in a bucket full of water. The soil or the manure will mix itself in water, and after a few hours all the soluble portions of plant food in the soil or the manure will be dissolved in water. Then filter the muddy water through blotting paper until it is clear, or simply pour off the clear water free from the sediment at the bottom of the bucket. Keep this water in a bottle and use it for this experiment.



In this case the plant will grow in just the same manner as if it were planted in the ground. But its roots being always in water, which is not the case with the plant in the ground, it will not be equally vigorous and productive.

What we learn from this experiment is that roots of plants take in plant food dissolved in water, while the plant in the experiment A lived for a short time only and died away as there was no food in the water.

#### MAGNIFYING GLASS.

##### PICTURE No. 3.

The magnifying glass is intended for showing the small parts of a flower, etc., as detailed in the reading book. Experiments with the magnifying glass are made frequently throughout the course.

#### EXPERIMENT IV.—*Osmose.*

Every plant is formed of cells (use of magnifying glass). At the end of the root of a plant there is a cell which takes the nourishment of the plant in. It is in fact a closed bag, and sucks in the plant food little by little when the food is presented to it dissolved in water.

This experiment is to show that a thinner or less dense liquid passes through a membrane into the thicker or denser liquid in larger quantity than the dense liquid passes outwards; in other words, plant food dissolved in the water in soil may pass into the roots of a plant.

##### PICTURE No. 4.

Apparatus required:—A wide-mouthed bottle; a tube open at both ends, the one end enlarged to the shape of a funnel; bladder; sulphate of copper, or milk, or solution of honey or treacle.

First fill the bottle with common drinking water, and then prepare a strong solution of sulphate of copper. Tie over the enlarged end of the tube with the bladder by means of string tied tightly, so that air may not enter, and then fill this tube with the strong solution of sulphate of copper, or with milk, or with solution of honey or treacle, and then dip the widened end into the water in the bottle, and hold it in its place by means of a cork. Mark the place where the liquid in the tube stands now (A). After half an hour or so the liquid will rise in the tube above the point (A), showing the liquid from the bottle has entered into the tube. On the other hand, it will be seen a small quantity of the liquid from the tube has passed into the bottle, as the water in the bottle is coloured with milk, etc., but that the quantity passing outwards is smaller than that passing inwards is shown by the rise of the liquid in the tube.

This process is called osmose. By this process the plants take their food from the water in the soil by means of their roots.

#### TRANSPIRATION.

##### EXPERIMENT No. 5.

To show the process of transpiration (or perspiration) through the pores of the leaves, etc., of plants. Note—The hard stems of plants have not the power of transpiration.

Apparatus required:—A good transparent glass jar or bottle, and an earthen pot containing a plant with healthy leaves.

Place the glass over the plant, and expose the whole apparatus to bright sunlight or daylight. After half an hour you will see the inner surface of the vessel quite dim with the watery vapour exuded from the leaves of the plant. The cold of the glass gradually condenses the vapour, which begins to flow down from the inner surface of the glass, showing that watery vapour is always exuded from the surface of plants. This action of the leaves of plants is called transpiration.

(Watery vapour is exuded not only from green leaves, but from other green portions of the stem through interstices called stomata.)

## EVOLUTION OF OXYGEN FROM PLANTS.

## EXPERIMENT No 6.

To show that living plants in the form of green leaves, etc., have the power of decomposing carbonic acid dissolved in water, etc., and of assimilating the carbon while setting free the oxygen, which is again added to the atmosphere.

Apparatus required :—A large bottle with a wide mouth ; a few leaves of any plant ; a small earthen basin which can hold the mouth of the bottle ; a bucket full of water.

Fill the bottle with water and leaves, and invert it in the basin full of water, so as not to leave any air bubbles at the bottom of the inverted bottle. Keep the bottle with the basin in the strong sunshine for about three hours. You will observe afterwards that some gas bubbles are seen adhering to the back of the leaves. This gas will collect in the upper part of the bottle. This is the oxygen gas evolved by the leaves through the stomata in the action of respiration. That this gas is not common air, but oxygen, may be proved by testing its properties.

The gas will probably relight a chip of wood the end of which is glowing, (i.e., a lighted piece of wood just blown out, but not fully extinguished).

## FORMATION OF CHALK FROM LIME-WATER.

## EXPERIMENT No. 7.

Apparatus required :—A glass tube of half an inch in diameter and a few inches long ; lime-water ; a glass vessel.

Pour a little lime-water\* in the glass vessel, dip one end of the glass tube with your right hand into the solution. Hold the vessel in your left hand. Then blow in air with your mouth. After a few minutes, the clear water will become turbid, and finally will assume a milky appearance, owing to the formation of chalk.† If this milky water were allowed to stand still for a few hours, the chalk will settle down, and clear water will float on its surface.

The following is a list of the apparatus required to be supplied to each primary school for the purpose of such experiments. The list is divided into two parts, the first part containing the apparatus which is essential, and the second part apparatus which it is desirable should also be supplied to each school, if funds permit, to enable further experiments to be performed. The cost of the first set is Re. 1-14, and of the second or non-essential set Rs. 2-12, making altogether only Rs. 4-10.

## List No. I.

Name of experiment.	Apparatus.	Approximate price.
1	2	3
		Rs.    A.    P.
1. Bottle culture ...	2 bottles ...	0   3   0
2. Ditto ...	Magnifying glass ...	1   0   0
3. Osmose ...	A glass tube ...	0   2   0
4. Transpiration ...	A glass ...	0   4   0
5. Evolution of oxygen gas from plants.	A big bottle ...	0   4   0
6. Lime-water and formation of chalk.	A tube ...	0   1   0
	Total ...	1   14   0

\* Preparation of lime-water :—Take a few pieces of burnt lime and pour water on them in a vessel. Instantly it will begin to boil and *chunam*, commonly eaten with *pan bida*, is formed. Then pour in some more water, and keep it for a few hours, after stirring it well. Then pour off the clear solution without stirring the lime into a bottle, and use it for experiment.

† Chalk is insoluble in water, while lime is soluble.

Additional apparatus desirable, but not absolutely essential.

List No. II.

Name of experiment.	Apparatus.	Approximate price.
1	2	3
		Rs. A. P.
1. Preparation of carbonic acid gas.	A wide-mouthed bottle, with two tubes, funnel, &c.	1 0 0
2. Preparation of hydrogen gas.	Two beakers ...	0 8 0
	A basin ...	0 8 0
	Acid sulphuric ...	0 4 0
	" hydrochloric ...	0 4 0
	Zinc ...	0 4 0
	Total ...	2 12 0

A very important practical portion in the teaching of agriculture in the Central Provinces is to be found in the fact that in every school where there is the slightest facility for it, a school garden is started. Naturally, these school gardens can be better fostered in the schools in the country than in those in town. The usual plan is for the plot of ground available to be marked out by small low raised banks into a number of separate plots, usually perhaps two or three yards square, and for each plot to be handed over to two of the boys of the school, who have to do practically all the work in connection with the plot in the way of sowing the seeds (usually those of vegetables and flowers), weeding, watering and generally bringing the crops up to maturity, when the produce of such plot of ground belongs to the boys who cultivate it.

The only expense in such a school garden is (1) for laying out the garden in the first instance, (2) for procuring the seeds, and (3) in some cases where water may have to be drawn up from a deep well, &c., a slight cost for part of the time of a cooly to draw up water, &c. As the third is an expense which can usually be avoided, and the second is one, which if the school-master understands his work can be prevented by his collecting and saving the seeds, etc., from the plants that are grown in the garden, practically the cost of a school garden usually reduces itself to the cost of laying it out in the first instance, amounting possibly to Rs. 3, Rs. 5, or Rs. 10 according to the size of the garden. Even this cost may be avoided by the school-master (with the aid of the villagers, &c.) doing the work himself. In the same way any tools required by the boys in the cultivation of their plots can always be borrowed from their own homes.

Definite instructions are issued in the form of circulars to school-masters, etc., on the subject of school gardens, dealing with the soil of the garden, the area wanted, watering, manuring, cultivation, sowing and transplanting, and also indicating the various crops, vegetables, flowers, etc., which may be grown at different seasons of the year in such school gardens.

3(B). It has been pointed out that in town schools agriculture is partly replaced by the teaching of a general elementary course in science in the upper primary standard, while physical science commences after the upper primary standard, and continues through the middle standard. The latter course is to a considerable extent similar to the plan adopted in middle schools in Bengal, where physical science is usually taught. There is, however, one point of difference, inasmuch as in the schools in the Central Provinces apparatus is provided for demonstrating the simple physical facts, while in middle schools in Bengal apparatus for such purposes is usually entirely wanting. On the other hand it is, in my opinion, doubtful whether the selection of the Physical Science Text-Book and of the apparatus to illustrate it in the Central

Provinces schools is quite judicious. In the case of the apparatus given, I am sure the selection is too ambitious, and several of the pieces supplied are not, and could not be, properly used. In Indian schools of this type the apparatus must be of exceedingly simple and inexpensive nature—apparatus which can be renewed or repaired locally in small villages by ordinary bazar artisans. This, however, is not the case in the Central Provinces, and in several cases I saw pieces of apparatus (such as Tate's air-pumps, Magdeburg hemispheres, &c.) out of order, which certainly could not be repaired by the master of the school or by any local artisan, and which were hence quite useless. The cost of the usual simple set of apparatus to teach physical science in middle schools in the Central Provinces is said to be about Rs. 26 or Rs. 27, but in larger towns under rich municipalities as much as Rs. 150 to Rs. 200 is spent for this purpose.

In the case of the science subjects taught in class IV (upper primary class) of the town schools in the Central Provinces, it is partly of the nature of that which is taught as agriculture in village schools and partly elementary natural history, etc. It is only intended in this course to give a slight and superficial knowledge of the materials met with in every-day life. There does not appear to be very much to comment on with reference to this section of the course. The subject and the teaching of it are probably not entirely satisfactory.

4. *Kindergarten*.—Kindergarten methods are used in the lower classes of the schools, and all the teachers who are now sent out from the training schools have to go through this system as a regular part of their instruction. As mentioned previously, kindergarten drawing is practised in the lower classes. Kindergarten or action songs are also encouraged, and in many schools the first six of the kindergarten gifts are employed in teaching. The cost of a set of the first six of Froebel's gifts, as made at Nagpur, is said to be about Rs. 7, but they are also made up in villages by carpenters, &c., for the use of village schools (where they are perhaps not quite so well finished as at Nagpur) for about Rs. 4 only. The following is a short description of the gifts alluded to:—

The first six kindergarten gifts of Froebel are usually—

The first gift of six soft balls, commonly of rubber covered with coloured worsted, but may be of wool only, representing the primary and secondary colours. With these the young pupils are taught to distinguish colours and to become acquainted with differences in material, shape, weight, and the properties of the balls. Games are usually designed in which the balls play a prominent part.

The second gift consists of a sphere, cylinder, and cube in wood. It offers opportunity for comparison first with the rubber balls, and then between the articles which constitute this gift as to shape, etc., etc.

The third gift is a cube (usually two inches) divided once in every way, thus forming eight cubes. With these various exercises in construction, etc., are carried out. The fourth, fifth, and sixth gifts consist of a cube variously divided, and these are used for similar exercises, but more advanced than those of the third gift.

Beyond these, as a rule, the schools do not go, though the seventh gift, a series of thin slabs or tablets, squares, half-squares, equilateral pieces, etc., etc., for making patterns, and the eighth gift a number of small wooden rods used for making figures, letters of the alphabet, etc., would certainly be useful. From the tenth gift (consisting of arrangements for drawing) upwards, practically Froebel's gifts introduce the elements of hand-and-eye and manual training. They illustrate drawing, paper cutting, paper weaving and interlacing, modelling, etc., etc., and these are usually included under these particular headings in schemes of general education. If I might venture an opinion on the kindergarten teaching in the Central Provinces, I should remark that this part has been taken practically bodily from European books, and it is doubtful whether more satisfactory results could not have been obtained by working on Froebel's principle or system, but giving the system, etc., what might be called a local atmosphere. Some of the gifts, in the form of wooden cubes, divided into complicated geometrical sections, are undoubtedly quite unfamiliar to Indian children in their ordinary lives, and it would probably have been better to select materials and objects for kindergarten work which are to be found in



every village, or which are easily within the power of construction of every village school-master.

5. *Object-lessons.*—I found in every village school that I went to small collections of objects which were used for the purpose of object-lessons. Generally also the village school-master had either himself prepared or had persuaded a village carpenter to prepare a small cupboard or box with compartments for storing these objects, most of them being duly named and kept in a particular compartment of the box or cupboard. I heard also one or two object-lessons given by the masters of the schools, but owing to my ignorance of *Mahrathi*, I can give only the general impression that the teachers seemed to know how to set to work to give object lessons.

Again, if I may make a criticism, it is to the effect that possibly the objects chosen might have been selected more judiciously. In some cases, various metals including even such valuable bodies as silver and gold, and the ores of such metals were taken as objects for lessons, and to my surprise gold quartz and silver ore were actually in the collections of some schools. It appeared to me that it would be better if the objects were such that they could all be procured in the school-house or in the immediate neighbourhood of each school, so that there would be no expense in making the collection, and all the objects worked with would be well known. Further, it would be a great advantage if the boys of a school were made to collect objects themselves, which would form part of a small school collection, and which would be used subsequently for the object lessons in the class. These collections could be wholly or partially renewed from year to year by fresh batches of pupils. In this way the children would take much more interest—even a personal interest—in the subject of the object-lessons, as they would deal with objects more or less belonging to them. If the system of object-lesson teaching is extended to Bengal schools, some such plan as this could be tried, for it would be certainly more economical, and probably more interesting and effective as a means of education.

6. *Manual training.*—I regret very much that owing to the discouragement which has been shown to this subject in the Central Provinces since 1891-92, I was unable to see the system at work in any of the village schools. It is, however, still taught in the training schools, and I was satisfied with the paper-cutting and pattern-making which I saw at the Nagpur School. I saw, however, no clay-modelling except in the shape of former specimens of work. So far as I could judge, these two forms of manual training must have been working fairly satisfactorily, and it was certainly a pity, when progress had been made, that they were more or less stopped. All the four ordinary forms of manual training, paper work and clay modelling with the addition of card-board work and sloyd work, seem to me to be very suitable for introduction into Bengal schools, but the work must be done in an exceedingly elementary way, and it must be a cheap system, and one that will not lead to the idea that any form of trade is being taught or fostered. That is, it must be taken up from the purely educational point of view, and probably no tools other than knives, scissors, &c., could be made admissible in such courses in schools. The introduction of trade or artizan implements—at all events at first—might probably lead to much opposition, and might prevent any progress being made in this highly important educational training.

This really concludes the criticism of the modern subjects taught in the vernacular schools of the Central Provinces. It does not appear necessary in any way to review the course of instruction adopted in such subjects as reading, writing, arithmetic, geography, history, &c., for the methods followed in the Central Provinces and Bengal appear to be fairly similar. It may, however, be remarked that while history and Euclid find a place in the upper primary course in Bengal, they are not taught even as optional subjects in primary schools in the Central Provinces. In other respects the subjects taught are more or less similar.

The above remarks also exhaust probably all that it is necessary for me to say on the subject of the education of boys up to the middle standard.

In the case of girls' education in the Central Provinces, I may remark it is exceedingly backward and limited in amount. Very few girls' schools indeed exist, and the great majority of these only teach up to the upper primary.



standard. There is little necessity, therefore, for noticing these schools in detail. It may, however, be mentioned that in girls' primary schools needlework is compulsory; drawing, grammar, object-lessons or elementary science and kindergarten occupations and manual training being optional, of which any two may be taken. Sanitation, though not specially mentioned, is really compulsory, as it is taught in the reading lessons in the 3rd and 4th Readers. In the matter of agriculture, the chapters on this subject in the third and fourth Readers are cancelled for the girls' course.

There is also a difference in the method of teaching drill and gymnastics, and the physical exercises used in the girls' schools are more correctly described as action songs and calisthenics, rather than drill and gymnastics. The system which I saw followed in a girls' school in Nagpur was more or less English or European in its character.

#### CLASSIFICATION OF VERNACULAR SCHOOLS AS REGARDS SOURCES OF INCOME, AND NOTES AS TO INSPECTION OF SCHOOLS.

ALMOST the whole of the schools in the Central Provinces are under public management, receive aid from public funds, and submit to regular inspection from the officers of the Educational Department. It is stated that there are less than 100 "venture" primary schools in the whole of the province and no "venture" middle schools, while the total number of primary schools in 1896-97 was 2,109 and of middle schools 149. Hence practically the venture schools may be neglected in any discussion of the condition of education in the Central Provinces. These vernacular schools appear to be divided into three classes:—

- (A) Those maintained by Government or by Boards such as District Councils, Boards, Municipalities, etc., the expenses being wholly met from public funds. This may be called the "fixed grant" system.
- (B) Those maintained wholly by payment on the results of the examinations plus school fees. This may be called the "result grant" system.
- (C) Those maintained partly by contribution from grants made by Government to public bodies, and partly by "payments by results" of the examination, etc., of the pupils. This may be called the "combined" system.

The schools of classes A and C constitute by far the larger number; those of class B are not so much encouraged. In this respect the schools in the Central Provinces exhibit a marked contrast to the primary schools in Bengal, where all except a small proportion belong to the result grant system, i.e., they are paid solely by results.

The result grant system, in which a considerable number of schools in the Central Provinces are working, also differs decidedly from the system as worked in Bengal. The Central Provinces system gives a school aid calculated *partly* on the number of passes in an examination conducted after prescribed standards and *partly* on the average attendance of pupils. No school is examined for a result grant which has not on the date of examination met on 180 school days from the date of the last examination, or in the case of new schools from the date of registration. These qualifications (and others which are noted below) of the method of sole or simple payment on examination results appear to be very wholesome, and might probably be extended with advantage in Bengal.

The subjects for examination in the vernacular schools, as pointed out previously, are divided into two classes, compulsory and optional. In these examinations no pupil can earn a grant who has not attended the school for at least 90 days. To pass in a subject he must obtain one-third of the maximum marks, but he cannot earn a grant in more than four optional subjects. There are also age restrictions. In the compulsory subjects of any standard no pupil can earn a grant unless he passes in at least two of these subjects. In the optional subjects of the first standard no pupil can earn a grant unless he passes in the three compulsory subjects of the standard. In other standards he must pass in at least two subjects.

In the combined system of schools the fixed grant cannot exceed Rs. 6 per mensem, and the result grants are given at the rate of 50 per cent. of the maximum rate attained in result grant schools.

In order to pass the upper primary examination a candidate must pass in the three compulsory subjects and at least two optional subjects.

I made enquiries into the working and results of the three classes of schools, A, B, and C, as indicated above, and I was assured by the Inspector of Schools that—

*Class A.*—The fixed grant system (schools fully maintained from public funds) are by far the best; they give the best kind of teaching and education, but on the other hand they are the most expensive of the three classes.

*Class B.*—The result grant system (schools paid no fixed grant, but only paid on the results of examination, etc.). These are the worst of all the classes of schools in the Central Provinces, giving the poorest education and least satisfactory discipline, but on the other hand they are decidedly the cheapest.

*Class C.*—The combined system (schools paid partly by fixed grants and partly by results grants). These stand intermediate between A and B, and give a fair education, while they are decidedly cheaper than A, but more expensive than B.

Speaking generally, the housing of schools of classes A and C is better than that of B, though attempts are made to gradually provide schools of class C with suitable school buildings by appealing to private subscriptions, District Boards, etc.

It will be seen that class B practically corresponds in its method of working and general conditions to the ordinary lower primary schools in Bengal.

Another point which is worthy of note in the case of these schools is that while there are only 2,109 primary and 149 middle schools in the Central Provinces, and a correspondingly small number of high schools, yet there are four Inspectors of Schools (in addition to the Inspector-General, who is an energetic inspecting officer), and 30 Deputy Inspectors of schools for supervising the work, giving roughly to each superior inspecting officer 450 primary and secondary schools and to each Deputy 75 only. It will thus be seen that the superior inspecting officers can be, and are, much more in touch with and have far greater personal control over elementary education in the Central Provinces than is possible in Bengal with its enormous number of schools and relatively smaller staff of Inspectors. Further, the Deputy Inspectors in the Central Provinces can give long personal visits to schools, to teach new forms of instruction, or to correct mistakes, etc., while in Bengal the Deputy Inspectors have practically no time and no such opportunity of working in detail with primary schools. It is probably certain that to this relatively very strong inspecting staff a considerable part of the success of the Central Provinces educational scheme has been due, for the numerous inspecting officers have been able to personally and individually work out in the schools the improvements which it had been decided by Government to introduce.

The good results are also due partly, if not largely, to the system of training of teachers in normal schools, which has been practised in the Central Provinces to a larger extent than is the case in Bengal.

Hence it appears necessary to review briefly the existing system of training schools as carried out in the Central Provinces.

#### TRAINING SCHOOLS FOR TEACHERS.

*Training schools.*—There are three training schools for teachers in the Central Provinces. One is for teachers in English and native schools in Nagpur, and the others for native school teachers only in Raipur and Jubbulpore. Probably about 100 to 110 teachers are trained and turned out each year, and as there are roughly only about 2,200 schools in the Central Provinces, the supply would appear to be fairly ample.

The training institution at Nagpur, contains two departments, a secondary and a primary. In the secondary department graduates, F.A. certificate-holders, and those that have passed the matriculation examination of any Indian university are trained for a year for employment in colleges and in high schools and in those middle schools which teach English. In the primary department students are prepared for employment in primary and vernacular schools generally by one or two years' course, according to the standard worked for.

In the normal school arrangements are made for instruction in—

I.—The Principles of Education.

II.— „ History „ „

III.— „ Practice „ „ including organisation of a school, methods of teaching, discipline, &c., and

IV.—Extra subjects (which may be taken up optionally), Physical Science, Drawing, and manual training.

V.—And in the lower parts of the school arrangements are made for continuing the general education of the teachers.

In the highest grade of teachership examination all the first four of the above subjects are taken up and have to be passed. For the secondary grade of certificates, section I is omitted, while even for the certificates of the primary grade of teachers the following subjects have to be passed\* :—

\* Page 82 of Central Provinces Education Manual.

A.—Easy questions on the Kindergarten system.

B.—Questions on the best method of teaching reading, spelling, grammar, writing, arithmetic, geography, drawing, and object lessons in a primary school.

C.—Questions on the art of oral teaching generally.

D.—Questions on the form of school registers, the mode of keeping them and making returns from them.

G.—To write notes on a lesson on a given subject.

F.—Questions on the organisation of a Primary school, and proof of ability to maintain order and inculcate principles of truthfulness, obedience, and general morality.

Only teachers who have passed the usual teachership examination are now allowed to join schools which receive aid from public funds, and comparing the standard which has to be reached for even primary teachers in the Central Provinces with the standard of qualification, or rather the want of qualifications, of the ordinary gurus in primary schools in Bengal, it will be seen how backward Bengal is in this respect.

It has not been thought necessary to add here any figures as to the cost of the ordinary work of normal or training schools. Such schools already exist at Calcutta, Hooghly, Dacca, Bankipur, &c., and their cost in Bengal is well ascertained.

The above subjects represented the ordinary course of instruction for a primary teacher up till recent years. Since, however, agriculture has been made a more prominent subject of teaching in primary schools, the course of instruction for teachers has also been extended, and they are now called upon to go through a six months' course in agriculture, theoretical and practical, and on the methods of teaching it, in the agricultural school attached to the Agricultural Experimental Farm at Nagpur. This course is partly theoretical, partly practical in the laboratory, and partly practical on the Farm. In addition also each teacher has a plot of ground given him, about two yards wide by five or six yards long, which he has to cultivate entirely himself (to dig, to plant, to weed, to water, etc., etc.), and the produce of this during the six months' course belongs to the student.

Batches of about 60 are taken each half-year, of whom about a quarter consist of students who have just passed through the training school, while the remaining 45 consist of actual teachers of schools who are drafted up from their schools, two or three being selected from each district for each course. At the end of six months there is the usual examination on which certificates are issued. In this way about 110 to 120 teachers of primary schools are trained annually in agricultural methods, and as time goes on practically all the teachers

of the province will become thus trained. In the case of the training school students who have just passed as certificated masters, they receive a scholarship allowance of Rs. 5 a month, while the actual masters drafted from the mufassal schools receive their own full pay, the pay of their substitutes being provided by the various District Councils, Boards, etc., under whom they are serving.

As this represents an important development in the method of training primary teachers, which is not at all represented in Bengal at present, and as it is connected with certain proposals made on the establishment of the Lower Agricultural Class at Sibpur (which has been lately opened, but which has not yet filled), it will be perhaps well to give a few details of the kind of instruction followed, and as to the staff, etc., required in the institution.

The following is the curriculum of study in the class which is intended for the instruction of vernacular school teachers:—

- |                       |     |  |
|-----------------------|-----|--|
| 1. Agriculture        | ... | As in Fuller's Primer.   |
| 2. Chemistry          | ... | Selected lessons to illustrate Fuller's Primer.  |
| 3. Kasra              | ... | Study of methods of land records, etc., and how to fill up certain forms used by village patwaris, and to learn cognate matters. |
| 4. Drawing            | ... | Primary course, model and freehand.  |
| 5. Veterinary science | ... | Lessons as given in Fuller's Primer.   |
| 6. Botany             | ... | Lectures as far as required to illustrate Fuller's Primer.   |

The actual work which these teachers have to get through in their six months' course of study is more clearly shown in the following detailed syllabus of study.

*Syllabus of Demonstration work to illustrate the Agricultural Primer.*

**Preliminary.**—Exhibit the magnifying glass, show magnifying powers of a drop of water on leaf-hairs; explain general structure of the microscope and show its effect with previously prepared slides, and also with objects (such as a flea) prepared for the occasion:—

**Lesson I.**—(With the microscope.) Vorticella, rotifera (fixed animals), desmids and diatoms (moving vegetables); volvox (the same in early stage).

(On the table.) Sensitive plant; examples of plants which open and close at certain hours.

(With the microscope.) The cellular structure of the root and stem of a plant.

**Lesson II.**—(On the table.) Structure of the orange, plantain, stem, tap roots and crown roots; root hairs as seen on a plant dug up, and on the rootlets of a plant grown in water; proof of root suction; exhibit endosmosis with a tube closed at one end by a piece of bladder; aerial roots of the maize; bargad and orchid; compare beet with carrot, onion and potato as specimens of root and of stem development.

**Lesson III.**—(With the microscope.) Fibro-vascular bundles in the plantain; cross sections showing their position in the plantain and the arhar; also the thickness of cell walls.

(On the table.) Sections of trees showing the annual growth under the outside bark, flax fibre and hemp fibre extracted from the plants. Experiments to show transpiration with a growing plant under a shade; then with leaves having their petioles in water and out of water.

(With the microscope.) Stomata of leaves; chlorophyll granules.

**Lesson IV.**—(On the table.) Cotton flower and seed.

(With the microscope.) Anthers and pollen grains; pollen grains adhering to stigma.

**Lesson V.**—(On the table.) Compare with cotton flower a flower of the pea-tribe; a til flower, a marigold, the flowering stock of the maize; male and female flowers of the gourd tribe; flowering stalks of the grass tribe; exhibit the Paris model of a pea flower and diagrams.

**Lesson VI.**—(On the table.) Repeat the experiment to show endosmosis, demonstrate the existence of invisible gases by showing the effect on light and on life of oxygen and carbonic acid gas confined in jars; prepare oxygen gas from chlorate of potash or red oxide of mercury; prepare carbonic acid gas from charcoal and prove its existence by lime water; show its existence in breath expelled from lungs; show the evolution of oxygen gas by leaves exposed to sunlight, in water, and the clearing of a jar of carbonic acid by plant action so as to render it possible to burn a light in it; illustrate the gaseous, liquid and solid conditions of matter by an experiment with sulphur.

**Lesson VII.**—(On the table.) Compare good and bad wheat seed and cotton seed; prove by pot cultivation that a good seed of wheat or cotton will produce a finer plant than a bad seed, if indeed the latter does not fail to germinate altogether; explain the loss in sowing for wheat a large amount of seed which does not germinate.

(In the field.)—Show the effect on plants of not being crowded, but having plenty of room and air.

**Lesson VIII.**—(On the table.) Compare different kinds of wheat seed, pissi, haura, kathua, and different kinds of cotton, bani, jari American.



**Lesson IX.**—(On the table.) Show by cultivation in distilled water that a plant can for some time live on what it obtains from air alone.

Chemical combination, its difference from mechanical combination illustrated by an experiment with zinc and sulphur, heated and unheated; explode hydrogen and oxygen and produce water; decompose water by electricity; compare a piece of chalk with specimens of calcium, carbon and oxygen gas; contrast chalk (carbonate of lime) with pure lime (lacking carbonic acid); prepare lime water from the latter; drive off carbonic acid from the former, and show the formation of chalk by the combination of the carbonic acid with the lime water; repeat the experiment on lime water with carbonic acid formed from charcoal; illustrate chemical combination by the formation of copper nitrate; show the rusting of iron by combination of oxygen; then drive off the oxygen from red oxide of mercury and show its reduction to pure metal and loss of weight owing to loss of oxygen.

Repeat the experiments described in the second clause under lesson VI; show loss of weight by dessication in case of cabbage or other fleshy leaved plant; weigh a piece of green bamboo; then dessicate to show weight of water; then reduce to charcoal to show the weight of substances other than carbon and mineral constituents; then reduce to ashes to show weight of mineral constituents.

**Lesson X.**—(On the table.) Exhibit specimens of different kinds of soils and analyze them mechanically to show various degrees of fineness.

(In the field.) The box system of keeping cattle and the proper storage of manure under cover.

**Lesson XI.**—(On the table.) Effect of watering with solution of saltpetre in pot cultivation. Pot cultivation with various manurial substances.

(In the field.) The sewage farm, the Ville and manure series of experimental plots.

**Lesson XII.**—(On the table.) Ball and ring experiment to show expansion by heat, contraction by cold; the thermometer; cracking of soils by alternate heating and cooling illustrated by heating a glass rod and cooling it suddenly. Show by mechanical analysis the varying proportion of fine particles in different samples of soils.

(In the field.) The construction and working of the earth-turning plough.

**Lesson XIII.**—(On the table.) Capillary action in a fine tube; in a sun-dry brick; contrast with a heap of loose earth.

**Lesson XIV.**—(In the field.) Embanking for wheat; effect of irrigation on wheat and garden crops.

(On the table.) Illustrate the effect of irrigation in pot cultivation.

**Lesson XV.**—(On the table.) Specimens of *kans* grass and of *agia*, if procurable.

(In the field.) Effect of allowing a field to become weedy or its plants overcrowded.

(With the microscope.) Rust, ergot, bunt and smut.

**Lesson XVI.**—(In the field.) Construction and use of the following implements:—

Swedish plough compared with the local Nagpur plough.

Bakhar, Daura, Dundia, Tifan, Argara.

Chain pump, steel lift, moth.

Winnower, thresher, sugarcane mills.

**Lesson XVII.**—(In the field.) Ensilage; if possible illustrate cattle-disease by examination of patients in the veterinary dispensary.

The following time table also shows the scheme of study of the students:—

#### NORMAL AGRICULTURAL CLASS.

TIME TABLE.

	7—8	8—9	9—10	3—4	4—5	5—6
Monday ...	Agriculture.			Kasra		(Leave)
Tuesday ...	Botany ...	Agriculture		Drawing	Gymnastics	Garden work.
Wednesday ...	Do. ...	Ditto		Model Farm	Model Farm	Ditto
Thursday ...	Chemistry	Ditto		Drawing	Gymnastics	(Leave)
Friday ...	Ditto ...	Ditto		Kasra	Ditto	Garden work.
Saturday ...	Examination.			Drawing	Veterinary science	Ditto

The staff which is required to teach these vernacular masters in two sections using two languages (Mahrathi and Hindi) and to superintend their practical training has also to take two higher grade Agricultural classes (first and second grade) working for revenue, etc., appointments which will be



referred to later on. The cost of the teaching staff is, however, moderate. It consists of the following gentlemen:—

	Pay.
	Rs.
<i>Principal.</i> —R. S. Joshi, D. Ag. ... ..	50
(Who gets also Rs. 175 as Superintendent of the Experimental Farm.)	
<i>Lecturer.</i> —I. N. Jakati, D. Ag. ... ..	80
" B. V. Joshi (Rs. 40 to Rs. 60 in five years) ... ..	50
<i>Drawing-master.</i> —(Comes from training school) ... ..	Nil.
<i>Veterinary lecturer.</i> —Receives an allowance of ... ..	20
(Is also Veterinary Inspector to D. V. C. and gets Rs. 70.)	
Total ... ..	200

That is for training 120 vernacular teachers per annum, and also the two agricultural classes, the total cost of lecturers, etc., is Rs. 200 a month only. As stated previously, there is a higher (English) class in agriculture the course for which extends over two years and which is held in the same building with the vernacular master's agricultural class. These students on passing out have a preferential claim on certain revenue, settlement and Court of Wards appointments. As this class is interesting at the present time, as it corresponds to the new agricultural class at Sibpur, I made a few enquiries as to its working. The numbers attending it are not large, as there are only fourteen students in the first-year class and four students in the second-year. The course of study which they have to go through comprises—

- Agriculture (theory and practice).
- Surveying (theory and practice).
- Chemistry (theoretical and practical).
- Botany.
- Geology.
- Elementary Veterinary Practice and Science.
- Drawing.

In the case of practical agriculture each student is given a plot of about a quarter of an acre of land, which he is required to cultivate entirely with his own hands, and the produce of which he is allowed to keep. They have also to do actual work in connection with the experimental agricultural farm in studying improved forms of agricultural implements, in studying the effects of manures on various crops, etc., etc.

It may probably be interesting to place on record the detailed course of studies which these agricultural students have to work through, for the purpose of comparison with the course which is being taught at Sibpur.

## AGRICULTURAL CLASS, NAGPUR.

### Syllabus of Studies.

#### A.—AGRICULTURE.

**SOILS.**—(*First year.*)—Origin of soils; soils *in situ* and alluvial soils; description of principal soils of the Central Provinces, with names and qualities; classification of soils by mechanical analysis; fertility of soils as dependent on composition, texture, depth and lie of surface; effect of climate in improving soils; improvement of soils by levelling and by embankment; cost of these processes.

(*Second year.*)—Physical properties of soils; their absorbent and evaporative powers; capillary action; chemical composition of soils considered with reference to supply of the more important plant food elements: the use and abuse of soil analysis; soil analysis by cropping (Ville's method); dormant and active condition of plant food elements; effect of climate and of tillage in converting plant food from the dormant to the active condition;

loss of plant food by surface scouring; the exhaustion of soils; its signs and its causes; uses and methods of fallowing; rotation of crops.

**TILLAGE.**—(*First year.*)—Objects to be attained; influence of climate in assisting and obstructing tillage; use of a fine tilth; the conditions in which different soils are suitable for sowing; different systems of tillage instanced by the systems followed for wheat, for *juari*, for sugar-cane and for rice; implements used for tillage; the *nāgar* in its different forms, *bakhar*, the clod crusher, English ploughs and harrows.

(*Second year.*)—The history of the plough; the theory and method of adjusting the English plough; the materials used for various implements and the method of their construction; special operations of tillage for breaking up waste land or eradicating grass; the advantages and dangers of deep ploughing; the effect of embanking land in lessening the need of tillage, the cost of the various operations of tillage.

**SOWING.**—(*First year.*)—The condition in which land is fit for sowing; methods of sowing practised with different crops; the *nari* plough, *tifans*, the *argara*; the broadcast sowing; the depths to which different seeds should be sown; thick and thin sowing; English drills; the growth of seedlings for transplantation; the advantages of transplanting.

(*Second year.*)—The vitality of seeds and means of ascertaining whether seed has retained its vitality or not; special preparation of seed for sowing; use of sulphuric acid for cotton; pickling seed; improvement of seed by special cultivation and selection; the principles to be followed in selecting seed, the use of changing seed; special treatments in preparing seed beds for the growth of seedlings for transplantation; cost of sowing and transplanting.

**MANURE.**—(*First year.*)—The need of applying manures; exhaustion of soils by continuous cropping; soils which give and do not give good returns for manuring; descriptions of manure used by the people and the method of their application; cattle dung, the best method of storing it; the condition in which it should be applied; the seasons for its application; green soiling; bones, the manufacture of bonemeal; saltpetre; town sewage.

(*Second year.*)—Manures considered in relation to plant food; the particular plant food supplied by different manures; suiting the manures to the requirements of the soil; the changes occurring in manure pits and the means of regulating them so as to prevent loss of value; the method of making bone superphosphate; the theory of green soiling and of growing crops in a mixture; use of slaked and unslaked lime and gypsum; the various methods of utilizing town sewage in agriculture; the cost of various manures and of applying them.

**IRRIGATION.**—(*First year.*)—The crops for which irrigation is needed; monsoon irrigation of rice; cold weather irrigation of wheat, vegetable, and sugar-cane; different methods of lifting water; the well bucket, the Persian wheel, the lever lift, the swing bucket, pumps; kuteha and pukka wells; the means of irrigating from streams and *nalas*; the irrigation of rice and sugar-cane from tanks.

(*Second year.*)—The extent to which water enters into the composition of plants; use of water as a carrier of plant food; sources from which plants derive their water-supply; the rainfall; the retention of moisture by different soils; the depths from which plants can draw sub-soil moisture; the circumstances which render irrigation necessary; its use in distributing the supply from rainfall rather than in adding to it; the method of constructing different water-lifts and their cost; the construction of pukka and kuteha wells; the method of lining kuteha wells; the places favourable for well construction; the construction of tanks and the places favourable for their construction; the methods of roughly testing discharges and ascertaining the efficiency of different means of lifting water; surface and underground drainage, natural and artificial.

**PROCESSES INTERMEDIATE BETWEEN SOWING AND REAPING.**—(*First year.*)—Weeding; the names and characters of the principal weeds; the injury which weeds cause to crops; the importance of not permitting weeds to seed. Weeding by hand and by bullock power; the *dawra* and *dundia*; cost of weeding; saving of weeding by good tillage; importance of keeping the ground open round the roots of growing plants in order to check evaporation.

(*Second year.*)—Increasing the yield of crops by checking their growth; lopping cotton; the "beasi" of Chhattisgarh; watching crops; methods of scaring animals; cost of watching; cheap methods of fencing; means of trapping noxious animals.

**GATHERING AND CLEANING.**—(*First year.*)—The harvesting of *juari*, *til*, wheat and linseed; the means of threshing and cleaning them used by the people contrasted with threshing and winnowing machines; the importance of proper cleaning; the meaning of "refraction" in trade.

(*Second year.*)—The harvesting of rice, cotton, sugar-cane and tobacco; rice cleaning cotton ginning, sugar boiling and tobacco curing; the manufacture of drained sugar.

**GENERAL.**—(*First year.*)—The Indian seasons and the crops which grow in them; the effect of heat and cold, moisture, drought and cloudy weather on different crops; crop diseases; rust, ergot and caterpillars.

(*Second year.*)—The principal crops grown in the Central Provinces; the habits of growth of their roots and stems and their effects in cleaning land, enriching or impoverishing it; the amount of each principal plant food contained in a crop of wheat, and the sources from which it obtains these foods; the part played by the atmosphere in the nutrition of plants; carbonic acid, its presence in the air and its fixation by plants; the ammonia received by the soil in rain; Nessler's tests; nature of fungoid disease as shown by the microscope.

**CULTIVATION OF SPECIAL CROPS.**—Students will be practically taught to grow and prepare for market the following crops:—

(*First year.*)—*Juari, til, wheat and linseed.*

(*Second year.*)—Cotton, rice, sugar-cane, tobacco and garden crops.

**FEEDING AND CARE OF STOCK.**—(*First year.*)—The food to be given to cattle in work and out of work; importance of a mixed diet; advantage of giving salt; injury resulting from sudden change from dry to green food; the comparative advantages of grazing and stall feeding; the growth of fodder crops, *poput, lakhori, guinea grass.*

(*Second year.*)—The chief breeds of cattle found in the Central Provinces; the best methods of housing cattle and preserving their manure; the use of the chaff cutter; ensilage; the comparative merits of cotton seed, *karbi wheat straw, rice straw and pulses* as cattle food; the influence of these foods on the value of cattle dung as manure.

**FRUIT GROWING.**—(*First year.*)—The methods of sowing and transplanting mangoes, oranges, plantains and guavas.

(*Second year.*)—Grafting and budding.

### B.—ELEMENTARY CHEMISTRY.

*First year.*—Changes occurring in air during the burning of a candle; chemical action; indestructibility of matter; elements and compounds; resolution and formation of compounds by analysis and synthesis; metals and non-metals; water; its decomposition by electricity into oxygen and hydrogen; other methods of preparing oxygen and hydrogen; properties of oxygen and hydrogen; ozone, its formation and properties; determination of the composition of water by volume and weight; three physical states of water; ice; steam; change of state produced by heat; expansion of bodies by heat; thermometers; maximum density of water; latent heat of water; evaporation; weight of water; specific gravity; compressibility of water; Florentine experiment; porosity of matter; purity of water; hard and soft water; filtration and distillation; water of crystallization; solvent property of water; liquid diffusion; dialysis; osmose; air; chemical composition of air; difference between simple mixture and chemical compound; eudiometer; preparation and properties of nitrogen; functions played by the several constituents of air in the economy of nature; action produced by animals and plants on air; weight of air; barometer; air-pump; combustion; carbon, its varieties and properties; structure of flame; blow-pipe; reducing and oxydising flame; preparation of coal gas; Davy's safety lamp; preparation and properties of nitric acid; ammonia and carbon dioxide; chlorine, its preparation and properties; preparation and properties of hydrochloric acid; aqua regia; bleaching powder and its uses; occurrence, modifications and properties of sulphur; silicon, its occurrence and properties; occurrence, preparation, modifications and properties of phosphorous; occurrence and properties of zinc, tin, lead, copper, mercury, silver, gold and platinum.

*Practical.*—Solution and filtration; preparation of hydrogen, oxygen, ammonia, carbon dioxide and nitric acid; mechanical analysis of soil; detection of lime in soil; and chemical analysis of simple salts containing the following basic and acid radicles:—

**Basic radicles.**—Lead, silver, mercury, bismuth, copper, cadmium, arsenic, antimony, iron, aluminium, chromium, nickel, cobalt, manganese, zinc.

**Acid radicles.**—Sulphuric, carbonic, nitric, hydrochloric.

*Second year.*—Atom and molecule; atomic weight; laws of combination; nomenclature, symbolic notation and formulæ; nature of acids, bases and salts; preparation and properties of sulphuric acid and hydrogen sulphide; silica, its occurrence and properties; tribasic phosphoric acid, its preparation and properties; preparation and properties of potassium; caustic potash; potassium carbonate; potassium nitrate; composition of gunpowder; composition of soap; sodium; caustic soda; sodium chloride; sodium carbonate; sodium nitrate; sodium sulphate; ammonium; ammonium chloride, carbonate, nitrate and sulphate; calcium; caustic and slaked lime; calcium carbonate, sulphate and chloride; aluminium; alumina; aluminium sulphate; formation of clay; composition of glass, porcelain and earthenware; magnesium; magnesia; magnesium sulphate; manganese; black oxide of manganese; iron, manufacture of wrought-iron, cast-iron and steel; ferrous sulphate and sulphide; ferric sulphate; carbohydrates; cane sugar; grape sugar; starch and woody fibre; albuminous substances; fibrine; casein; gluten and gelatin; composition of bone, blood, saliva, gastric juice, bile, milk and urine.

*Practical.*—Chemical analysis of simple salts, containing the following basic and acid radicles and a few mixtures of the above salts:—

**Basic radicles.**—Barium, strontium, calcium, magnesium, potassium, sodium, ammonium.

**Acid radicles.**—Sulphuric, carbonic, silicic, phosphoric, hydrochloric, nitric.

Manufacture of superphosphate; detection of organic acids in soils; detection and distinguishing of starch and sugar; detection of phosphates, potassium compounds and calcium compounds in soil and ashes of plants.

## C.—ELEMENTARY GEOLOGY.

*First year.*—Object of geology; crust of the earth; materials of which the crust is made; definition of rock and mineral; three great classes of rocks—(1) sedimentary (including organically formed), (2) igneous and (3) metamorphic; description of typical specimens of the different classes of rocks; sandstone, chalk; granite, gneiss; origin and mode of formation of the different classes of rocks; change producing agencies; atmospheric agencies; action of carbon dioxide, oxygen, moisture, frost and winds; formation of soil *in situ*; aqueous agencies; action of streams, rivers, springs, seas and ice action; organic agencies, coral zöophytes, shell-fish, foraminifera; peat mosses, &c; formation of coal; igneous agencies; interior of the earth; hot springs, volcanoes, earthquakes and slow movements of the crust; fossils and fossilization; uses of fossils in geology; general characters of minerals of common occurrence, quartz, chalcedony, jasper, agate, flint, felspar, hornblende, zeolite, mica, calcite, gypsum, apatite, fluorspar, rock-salt.

*Second year.*—Structure of rocks, stratified, colitic, crystalline, glassy, porphyritic vesicular, amygdaloidal, schistose; arrangement of rocks, stratification, ripple marks and rain-prints, conformable and unconformable strata, dip, strike, out-crop, anticline and syncline, faults, metamorphism, bosses, intrusive and interstratified sheets, veins and dykes; mineral veins; characteristics of different kinds of rocks, sandstone, grit, conglomerate, shale, limestone, dolomite, gypsum, rock-salt, iron stone, shell marl, coral rock, chalk, peat, lignite, coal, graphite, anthracite, bombs, volcanic ash, lava, obsidian, pumice, trachyte, granite, basalt, laterite, slate, mica-schist, gneiss, marble; succession of strata; relative age of rocks; tests for determining the relative age of rocks; geological divisions, azoic, palaeozoic, mesozoic, neo-zoic; nebular hypothesis; azoic rocks and their occurrence in India, composition, distribution, economic products and characteristic fossils of the formations of stratified rocks; silurian, devonian, carboniferous, permian, triassic, colitic, cretaceous, tertiary and recent; principal formations of Peninsular India, Gondwana, jurassic, cretaceous, Deccan trap, tertiary, post tertiary.

*Practical.*—Identification of the rocks and minerals of common occurrence, and a general knowledge of the geology of Nagpur based on Hislop's account of it.

## D.—ELEMENTARY BOTANY.

*First year.*—General characters of flowering plants; structure of a typical plant; organs of nutrition and reproduction; characters of roots, stems, leaves; root fibres and root hairs; true and adventitious roots; aerial roots; forms of roots; parasites and epiphytes; buds; forms of stems; tendril; spine; prickle; parts of leaf; duration, arrangement, outlines; margin and surface of leaves; venation; simple and compound leaves; vernation; inflorescence; bracts; involucre; receptacle; floral whorls; insertion, adhesion, and cohesion of parts of floral whorls; suppression and multiplication of parts; aestivation; placentation; description of specimens of plants; functions of root, stem, leaves, flower; fertilization; crossing; classification; species, genera, orders and classes; primary division of plants, flowering and flowerless; distinguishing characters of dicotyledons and mono-cotyledons; structure of plants of the following natural orders, Leguminosæ, Malvaceæ, Cucurbitaceæ.

*Second year.*—The fruit and its parts; dehiscence of fruits; classification of fruits; structure of different kinds of fruits, legume, drupe, capsule, berry, achene, nut; the formation and development of the following fruits:—Orange, guava, mulberry, fig, cotton pod, cucumber, pea, mango, cocoanut; the seed and its parts; germination of seeds; conditions essential for germination; surface coverings and appendages; cells, their forms, structure, composition and contents; growth by division of cells; tissues of plants, parenchyma, epidermis, wood, bast and vascular tissues; latex vessels; fibrovascular bundles; internal structure of root, stem, leaves; arrangement of tissues of stem in dicotyledons and mono-cotyledons; food of plants; conditions of plant growth; selection and absorption of food and storing of nutriment; ascent of the crude sap; respiration, transpiration, assimilation; descent of sap; influence of light and heat on plants; origin of species; structure of plants of the following natural orders:—Compositæ, Cruciferae, Myrtaceæ, Urticaceæ, Graminae.

## E.—LAND SURVEYING.

*First year.*—Plotting to scale; map drawing and colouring and the use of conventional signs; chain surveying by triangles and by sight rule; survey by intersection; calculation of areas by mensuration and by acre comb.

*Second year.*—Use of the theodolite and chain in traversing; traversing with the sight rule and protractor; Gale's method of plotting a traverse; proving a traverse and calculation of areas by universal theorem; use of the planimeter, proportional compasses and pantagraph.

## F.—DRAWING.

*First year.*—Free hand.

*Second year.*—Model.



G.—VETERINARY SCIENCE.

*First-year (junior class) students.*

**Anatomy.**—The main anatomical parts, and the practical names given to them by veterinarians; the age of bullocks; the names of important joints; contents of the thorax, abdomen and pelvis, with their names and positions; the different parts of the feet of a bullock; practical dissection.

**Physiology.**—The function of important organs in the chest and abdomen, and of the urinary organs. Respiration, circulation and the process of digestion.

**Practical demonstration—Handling and castrating animals.**—Methods of throwing bullocks, the names and uses of the veterinary appliances at the hospital, and the uses of simple surgical instruments, including the clinical thermometer and catheters. Castrating instruments. The feeding, management, and general keep of cattle.

The dressing of wounds and ulcers, and treatment of ordinary cases attending the hospital.

**Materia Medica and Pharmacy.**—The methods of making up and administering drenches, balls. Making infusions, decoctions, powders, ointments and liniments. The names, uses and doses of the principal medicines, both English and country, with their actions, such as narcotics, diuretics, astringents, purgatives, diaphoretics, disinfectants, stimulants, sedatives and tonics. Botanical names of plants forming some of the above with ocular demonstration if possible.

*Second-year (senior class) students.*

- (1) The four deadly forms of cattle disease, with their chief symptoms and medicinal treatment. Sanitary measures for the suppression and prevention of these diseases.
- (2) Minor diseases of cattle, with chief symptoms and their treatment.
- (3) Treatment of ordinary forms of wounds, broken horn and ulcers.
- (4) *Post-mortem* examination
- (5) The popular method of castration, with practical illustrations, and the principles of cattle-breeding.
- (6) Lameness, sprains, shoulder slip, etc., with the names of the diseases of main joints and their treatment.
- (7) Surgical operations, viz., opening abscesses, removing tumours, tapping the abdomen for hoven, etc., blood-letting.

The course of study and practice appear to be very practical and suitable, and likely to turn out men who will not be above their work, but who will take a practical interest in all matters connected with agriculture.

Probably, however, it is not necessary to go into greater detail in connection with this point.

*Teachers' Manuals.*

The last point it appears necessary for me to refer to in connection with my visit to the Central Provinces is on the subject of teachers' manuals.

It has been found desirable there to prepare books for the use of teachers of various grades of schools, treating on the various phases of school life, and the best methods of obtaining good results.

A manual was prepared many years ago by Mr. Carnduff, who was an Inspector of Schools in the Central Provinces. This work, or at all events the English edition, is now out of print. A work called *Siksa Patra*, which is still used by teachers in many schools in the Central Provinces, is said to be a Hindi translation of Mr. Carnduff's work. It appears to be a work which has done, and is doing good. It contains chapters on the qualities required in masters and pupils, and on the procedure as to registers, time-tables, management of schools and classes, etc., etc. Then follow instructions as to the best methods of teaching classes various subjects in various standards, and afterwards general subjects dealing with the management of school work, the connection of teachers with school committees, the nature of school buildings and school apparatus, etc. There was, and is, undoubtedly, ample scope for such a work, and specially there is scope for such a work in Bengal.

As Mr. Carnduff's work is out of print, and as the introduction of modern subjects and methods of teaching had rendered the work out of date, Mr. Spence, the Head Master of the Nagpur Training or Normal School, has written a Teachers' Manual, which is, I believe, really to be printed. Translations of it are now being prepared in Hindi, Maithili, etc., and I am informed when the translations are ready, the work will be simultaneously published in English and the vernaculars.



The Committee which is now sitting for the purpose of revising or remodelling the system of vernacular education in Bengal had at one of its first meetings come to the conclusion that a Teachers' Manual is urgently wanted for the use of school-masters in Bengal, and the fact that the want has also been found, and is being supplied in the Central Provinces will probably show that the conclusion of the Committee was sound.

#### CONCLUDING REMARKS.

In concluding my remarks on the subject of the vernacular education in the Central Provinces, and comparing it with that in Bengal, I am constrained to remark that in such matters as drill, drawing, agricultural teaching, physical science teaching, kindergarten teaching, and object-lesson teaching, the vernacular schools in the Central Provinces are very decidedly in advance of anything we can show in Bengal. In the matter of manual work also a good beginning was apparently made in the Central Provinces, and so far as it went the attempt was successful, and proved that manual training can be introduced in Indian schools.

All these modern methods and subjects of education therefore have been shown to be practical in one province, and it remains to be seen whether equally successful, or possibly more successful, results could not be obtained in other provinces, such as Bengal. Experience has there shown that such subjects are well suited to Indian children, and that they take much interest in them, and further that the introduction of modern methods of teaching does not enhance the cost of education, while European experience has proved that education conducted on these lines is far more satisfactory and gives far better results than when confined to the old methods and subjects of teaching.

ALEX. PEDLER.

**FIRST FORECAST OF THE JUTE CROP IN BENGAL  
FOR SEASON 1899.**

The following is published for general information.

F. A. SLACK,

The 5th July, 1899.

Offg. Secy. to the Govt. of Bengal.

**DEPARTMENT OF LAND RECORDS AND AGRICULTURE,  
BENGAL.**

*First forecast of the Jute crop in Bengal for season 1899.*

*Explanatory.*—The present forecast furnishes estimates of the area and outturn of the jute crop up to the middle of June, and is compiled from the returns received from the 26 important jute-growing districts of these Provinces. The cultivation of jute outside these districts is insignificant and has been left out of consideration.

2. *Character of the season.*—The rainfall in January was generally in excess of the normal in all the jute-growing districts except Orissa. In February, it was above the normal in East Bengal, Jessore, and Midnapore, and below the normal in all the other districts. In March, again, it was below the normal everywhere except in Jalpaiguri and Rangpur. In April, the rainfall was well distributed, and was generally above the normal. Very heavy rain was received in this month in Khulna and Noakhali. In May, with the exception of Burdwan, and a few districts in North Bengal and Bihar, the rainfall was everywhere above the normal, and was excessive in East Bengal and in the districts of Hughli, the 24-Parganas and Nadia. This excess does not appear to have affected the crop much in East Bengal (Noakhali excepted) but is reported to have prevented the full area from being sown in Hughli and the 24-Parganas, and to have injured the seedlings in Hughli and Nadia. In the first fortnight of June, the weather was, on the whole, seasonable, and weeding operations were carried out successfully in most places; but the rain that has fallen up to date this month may have interfered somewhat with late sowings.

3. *Area cultivated.*—In the first forecast of the jute crop for the season 1898, it was explained that the figures of normal area as given in that report were obtained from a consideration of the actual areas sown during the past five years. Those figures have been accepted in the present returns as more or less correct in the case of most districts, but they have been revised by the District Officers of Bardwan, Nadia, Rangpur, Dacca, Faridpur and Backergunge, and with these revised estimates, the normal area under jute now amounts to 2,189,400 acres against 2,224,300 acres shown in the forecast of last year. The total area in Bengal sown with jute during the current year appears from the returns appended to this note to amount to 1,914,300 acres against 1,624,400 acres sown in 1898. The great decrease in 1898 was due to a fall in the price of jute and a simultaneous rise in the price of rice. Since then the price of jute has risen, while that of rice has fallen, and the increase in the area sown with jute this year, amounting to 289,900 acres or 17·8 per cent, is undoubtedly due to these fluctuations in prices. It will be noted, however, that the area is still smaller than that which was sown in 1895, 1896

and 1897, the cultivators not having yet forgotten the fall in the price of jute which took place in 1897.

4. *Character of the crop.*—In spite of the excessive rainfall in May in many important districts, the prospects of the crop as reported up to the middle of June are good, and the latest reports received in this Department from the chief jute-growing districts confirm this favourable report.

In the eleven important jute-growing districts marginally\* noted, which each have an area over 50,000 acres and contain about 87 per cent. of the total jute-growing area of Bengal, the average outturn estimated for the year amounts to 93·2 per cent. In 10 districts, the present estimates of the crop are returned as 100 per cent. or over 100 per cent.; in 12 districts, they are now estimated at 75 per cent. to below 100 per cent.; and in 4 districts only, viz., Hughli, Nadia, Darjeeling, and Noakhali, are the returns below 75 per cent. Although rain has been somewhat excessive lately, it does not appear to have injured the crop; but the final outturn is greatly dependent on the weather experienced in July and August and on the height of the rivers in those months.

It would appear probable, therefore, that if the present conditions continue, a crop slightly below the average will be reaped in the area sown this year. It must be remembered, however, that this area is still a good deal below the average, and that the total outturn for the whole Province will be accordingly, in all probability, considerably below the normal.

5. *Stocks of previous crops in hand.*—It is reported by almost all District Officers that very little jute is now left in hand from the stocks of 1897 and 1898.

6. *Gross outturn.*—Taking into consideration the estimates of area and outturn detailed in the returns, and accepting 3 bales per acre as the outturn of a normal or 100 per. cent crop, the gross outturn of jute may be roughly estimated for the present crop at 58 lakhs of bales. The normal outturn for the Province may be taken as about 66 lakhs of bales, so that the present estimated outturn approximates to 87 per cent. of the normal outturn. Taking 16 annas to represent this normal outturn, the outturn of the present crop, is thus estimated to amount to 14 annas of the normal. As noted in the forecasts for the year 1898, the above is at best only a rough estimate. The District returns are published in full, and those who are interested in the jute trade are in a position to make such deductions from them as their experience may suggest.

N. N. BANERJEE,

*Asst. Director of the Department of Land Records  
and Agriculture, Bengal.*

Countersigned.

P. C. LYON,

*Director of the Dept. of Land Records  
and Agriculture, Bengal.*

CALCUTTA;

The 27th June 1899.

*First Forecast of the Jute Crop of Bengal, 1899.*

Division.	District.	Remarks by District Officers.						Remarks by the Department of Land Records and Agriculture, Bengal.		
		1	2	3	4	5	6	7	8	9
			Approximate normal area under jute.	Approximate area sown last year (1898).	Estimated area sown this year (1899).	Taking 100 to represent the normal outturn per acre, how much represented outturn last year (1898)?	Taking 100 to represent the normal outturn per acre, how much will represent this year's outturn (1899)?			
Burdwan	Burdwan	...	Acres. 11,000	Acres. 11,000	Acres. 11,000	100	86			
	Midnapore	...	12,100	11,900	12,300	79	80			
	Hoochly	...	12,000	13,000	13,100	100	61			
Presidency	24 Parganas	...	37,700	30,000	33,600	100	95			

Rainfall was deficient at the time of sowing in the S-dar and Katwa subdivisions and heavy in the Kalna subdivision. In the Raniganj subdivision, it was seasonable.  
The increase in area and outturn is due to seasonable rainfall.

The decrease in area this year as compared with that of last year is due to excessive rain during the latter part of May. The decrease in the outturn in column 7 is due to the fact that a large area was submerged after sowing. Prospects may be better later on.

Decrease in the outturn this year is anticipated, owing to the heavy rain in May, which interfered with the successful sowing of the crop. The increase in area is due to the low price of rice and the higher price of jute.

Divisions.	District.	Approximate normal area under Jute.					Approximate area sown last year. (1898).	Estimated area sown this year (1899).	Taking 100 to represent the normal sown outturn per acre, how much represented outturn last year (1898)?	Taking 100 to represent the normal outturn per acre, how much will represent this year's outturn (1899)?	Remarks by District Officers.	Remarks by the Department of Land Records and Agriculture, Bengal.
		1	2	3	4	5	6	7	8	9		
Presidency— censid.	Nadia	...	...	47,000	26,600	40,000	81	70				
	Murshidabad	...	...	21,700	16,600	19,600	83	88				
	Jessore	...	...	33,200	19,100	27,300	71	96				
	Khulna	...	...	20,800	14,500	16,100	70	93				
	Bahadur	...	...	108,100	100,200	108,700	78	105				
	Dinajpur	...	...	90,500	76,000	75,000	100	100				
		<p>The increase in the area sown this year is due to seasonable rainfall at the time of sowing and to the high prices of jute now prevailing; but the recent excessive rain has done much damage to the crop; hence the decrease in the outturn.</p> <p>The increase in the area sown this year is due to the low prices of food-grains, and the increase in the estimated outturn is due to favourable rainfall at the time of sowing.</p> <p>The prospects this year are better on account of seasonable rain.</p> <p>Owing to timely rainfall and to the low price of jute, the cultivation of jute this year is a little in excess of that of 1898.</p> <p>The area sown with jute this year is about the same as that of last year. Up to date the rainfall seems favourable to the cultivation of jute, which is likely to yield an average crop.</p>									The outturn has possibly been underestimated. The estimate of normal area seems high.	



District	Taluk	Area under cultivation in acres	Area under cultivation in bighas	Area under cultivation in acres	Area under cultivation in bighas	Remarks
Rajshahi	Jalpaiguri	46,700	62,800	64,800	76	Seasonable rainfall has helped the growth of the crop. The outturn of this year may be expected to be better than that of last year.
	Parbatling (plains)	2,500	3,000	1,600	50	Owing to unseasonable rainfall this year, no better outturn is expected than that of last year.
	Rangpur	277,000	152,000	212,200	81	Owing to the high price of jute last year, the cultivators have sown more lands with this crop this year than in the last year.
	Hogra	93,900	40,000	75,000	100	The rainfall has been favourable on the whole till now, and so a better outturn is expected.
Dacca	Padma	144,500	103,500	123,000	100	Better prices obtained for jute during last year as compared with the preceding year, and the low price of rice has induced cultivators to grow jute to a larger extent during the current year than in the last. The stock of seed-grains being full, the cultivators appear to have turned to jute as a means of making money. Want of rain in the beginning has interfered with the sowings, but sufficient rain has since fallen, and a full average crop may be expected if the weather continues favourable.
	Dacca	171,000	132,000	150,000	100	The more extensive cultivation of jute is due to the low price of paddy. The favourable weather holds out hope of a good outturn.
	Mymensingh	535,500	697,500	508,000	93	Owing to the fall in the price of rice, the area sown with jute has increased during this year.
	Fardpur	120,000	70,000	80,000	100	The normal area has been revised, as the figure reported last year by the Subdivisional Officer of Gauda is incorrect on the face of it. The increase in area this year as compared with that of last year is due to timely rainfall during the sowing season.
Dacca	Backergunge	10,000	7,500	10,000	100	The outturn will probably be better than that of last year, owing to better rainfall during the year under report.
	Backergunge	10,000	7,500	10,000	100	The area under jute this year is about normal. The relative prices of rice and jute have caused an increase in the area this year over that of last year.

The normal area in column 3 has been revised by the Collector.

The Collector has revised the normal area in column 3.

The area in column 3 has been revised by the Collector after enquiry.

DIVISION.	District.	Approximate normal area under jute.					Approximate area sown last year (1898).					Estimated area sown this year (1899).					Taking 100 to represent the normal output per acre, how much repesented output last year (1898) ?					Taking 100 to represent the normal output per acre, how much will represent this year's output (1899) ?					Remarks by District Officers.	Remarks by the Department of Land Records and Agriculture, Bengal.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25		
Chittagong ..	Tippera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	The increase in the area sown this year is partly due to timely and abundant rainfall and partly to paddy lands being sown with jute, owing to the fall in the market price of rice. The smaller estimated output is due to excessive rainfall since the sowing of jute. The sowing has just commenced, and if the weather continue favourable, the whole area sown last year will probably be sown this year. The rainfall in the Sadar and Araria subdivisions has done good to the crop, but the short rainfall in May in the Kishoreganj subdivision has retarded the growth of the plants in that locality. Owing to timely rainfall, a better output than that of last year is expected. In certain localities sowing has not yet begun. Owing to seasonable rainfall, the output has been estimated above the normal. The season seems to be favourable for the growth of the crop. The decrease in the area sown this year as compared with that of last year is due to the fact that there has been no cultivation of jute in Chittagong this year, whereas 200 acres were under cultivation last year.	• Estimated by this Department.
	Noakhali	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
	Bhagalpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
	Purnea	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Orissa ..	Maldas	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		• Estimated by this Department.
	Cuttack	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
	Balasore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Total		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		

CALCUTTA MUNICIPAL BILL.

MUNICIPAL DEPARTMENT.

The following correspondence is published for general information.

E. W. COLLIN,

*Offg. Secy. to the Govt. of Bengal.*

*The 11th July 1899.*

No. 180T., dated Calcutta, the 4th May 1899.

From—The Asst. Secy. to the Government of Bengal, Legislative Department,  
To—The Secretary to the Government of India, Legislative Department.

I AM directed to submit, in pursuance of Rules 3 and 7 (4) of the revised instructions regarding legislation in Local Councils, a copy\* of the Calcutta Municipal Bill as amended by the Select Committee, together with a copy\* of the Report of the Committee,\* and to request that the sanction of the Government of India may be accorded to the penal clauses of the Bill, namely, sections 602 to 609. These sections have been modified by the Select Committee, and His Honour the Lieutenant-Governor proposes to accept them as they stand in the amended Bill.

\* With 25 spare copies.

No. 93, dated Simla, the 17th June 1899.

From—A. H. L. FRASER, Esq., C.S.I., Offg. Secy. to the Govt. of India, Home Dept.,  
To—The Secretary to the Government of Bengal, Legislative Department.

I AM directed to acknowledge the receipt of your letter No. 180T., dated the 4th ultimo, submitting a copy of the Calcutta Municipal Bill as amended by the Select Committee with a copy of the Committee's report. These papers have been carefully considered by His Excellency in Council, and I am to communicate the following remarks and proposals.

2. The late Lieutenant-Governor of Bengal, Sir Alexander Mackenzie, set forth the grounds for the introduction of this Bill in Mr. Risley's letter No. 383T.M., dated the 17th June 1897. He drew attention to certain matters in respect of which the existing system of municipal government in Calcutta had failed, and to certain flagrant abuses which had grown up under it. The principal grounds for the introduction of the present Bill, as summarized by him, were as follows:—

- (1) the complete failure of the elective system to secure adequate representation even of the different interests existing in the native city;
- (2) the practical exclusion of European men of business from all share in the municipal government of Calcutta;
- (3) the growth of party spirit and the appearance among the elected Commissioners of a class of professional and in some cases corrupt politicians;
- (4) the abuse of the Committee system, which paralyzed the executive officers and demoralized the subordinate staff; and
- (5) the consequent breakdown of the conservancy and water-supply of the town and of every department of municipal administration.

3. The Government of India fully accepted the necessity for the remedy of these abuses; and they assented generally to the principle of the proposed legislation, while in respect of details they relied at that early stage upon the high authority of Sir Alexander Mackenzie. In submitting the Bill to the Secretary of State (Despatch No. 1, dated the 6th January 1898), the Government of India said: "We desire to give our fullest support to the Lieutenant-Governor in his endeavour to improve the system of municipal government and to remove the sanitary defects of Calcutta, and we approve of the introduction."

in the Legislative Council of Bengal of a Bill based on the general lines of the Bill under consideration. But we have refrained for the present from any general discussion of the details of the Bill; and we think that the responsibility for them should rest with Sir Alexander Mackenzie." It may be noted also that in this Despatch the Government of India, even at that early stage, indicated a preference, as regards the constitution of the General Committee, for the model of the Bombay City Municipal Act. It was only in deference to Sir Alexander Mackenzie's strongly-expressed objections that they did not at that time persist in their views in this respect.

4. The Secretary of State (in His Lordship's Despatch No. 25, dated the 10th February 1898), after summarizing the views of the Bengal Government and of the Government of India, communicated in very cautious language his acceptance, not of the Bill itself, but of the principle that the executive should be strengthened, and that the bodies representing the trade of Calcutta should have a voice on the General Committee. He added that he would watch with interest the discussion of the proposed Bill in the Council of the Lieutenant-Governor.

5. In these circumstances the Bill was introduced into the Local Council on the 19th March 1898; and it was referred to a Select Committee on the 4th April 1898. Meanwhile Sir Alexander Mackenzie resigned the office of Lieutenant-Governor; and Sir John Woodburn succeeded him on the 7th April 1898. In opening the winter session of the Local Council on the 12th November 1898, His Honour made a statement upon the course of business. He dwelt especially on this Bill, the consideration of which by the Select Committee was to be the main work of the session. He accepted fully the decisions of the Council, which had endorsed the proposals of his predecessor. He specially quoted with approval the opinion of Sir Henry Harrison, a distinguished Chairman of the Corporation, that "under its present constitution there is a lack of motive power. The energies of the municipal government expend themselves in criticism and not in action;" and His Honour added, "in the administration of a great city there must be provision for prompt, steady and efficacious action; and there is no room for doubt that reform of some sort is needed."

6. The Select Committee began their sittings on the same date, the 12th November 1898, and have met forty times, discussing the Bill section by section, and devoting to it what appears to have been a very patient and thorough examination. They have carefully considered the Bill itself, the voluminous criticisms referred to in the first paragraph of their report, and the views of the Calcutta Building Commission. They have recognized the limitations imposed by the reference from the Local Council under which they were acting; but they have proposed a large number of alterations, some of which are of considerable importance. And now the amended Bill with their report is submitted for the renewed consideration of the Government of India.

7. The Government of India cannot fail to realize that they have a special responsibility in this case. It would be strange indeed if they did not feel a peculiar interest in a measure affecting the municipal constitution of a city, which is not merely the capital of the Province of Bengal, but also the seat of the Imperial Government and the capital of the Indian Empire. They are deeply persuaded of the importance of a local administration, which shall adequately represent the various great interests that have placed, and still keep, Calcutta in its premier position in India, and which shall be businesslike, efficient, and free from scandal or reproach. At the same time it would be their natural desire, in the interests both of continuity of administration and of public harmony, to see these objects attained, not by any contravention of the broad principles of Local Self-Government already conceded, but by a curtailment of the abuses to which in practice they may have become exposed, and by a restriction, within limits suggested by experience, of the range of their future operation. In these opinions the Government of India are convinced that they have the sympathy of the Lieutenant-Governor.

8. In the course of the passage of the Bill through its various stages, much criticism has been bestowed upon it from many quarters; and, while a good deal of this criticism has been of only ephemeral value and has rested upon no solid foundation, the Government of India have been led, after a careful

and independent investigation, to think that there are features in Sir Alexander Mackenzie's Bill, which are not in entire accordance with the principles just laid down, and which might not in practice ensure that amicable and patriotic co-operation of all parties in the future municipal government of the city, which is essential to its efficient administration.

9. The first of these points is the want of correspondence, in constituent proportions, between the Corporation, which is still left under the Bill with its original numbers (75) and constituent elements (50 elected by wards, 10 elected by bodies representing trade, and 15 appointed by the Government) and the new General Committee of 12 members, to be constituted in the opposite proportions of 8 from the 25 members representing trade or appointed by the Government and 4 from the 50 ward members. This proposal, however fairly it may be held to give representation on the General Committee to the leading interest in the city, and however well it may have been expected by Sir Alexander Mackenzie to work in practice, is undoubtedly illogical, inasmuch as it introduces a wholly different basis of representation in the small executive body from that upon which the larger administrative body is constituted. Moreover, it has been anticipated that this lack of proportion, and the divergent interests which it may be expected to some extent to create, will be liable to produce friction between the two bodies, upon whose harmonious co-operation the future government of Calcutta must so largely depend. To the success of any scheme of municipal reform the absence of such a spirit of concord would unquestionably be detrimental, if indeed it did not in the long run prove to be disastrous.

10. Such were the opinions which the Government of India had been led to form by attitude of public opinion towards the Bill, and by a careful study of the Bill itself at the time when the Select Committee began their labours. It has now emerged from the Select Committee; and the Government of India are called upon to consider the Bill in its amended shape.

11. In some respects the Bill is now a stronger and a better Bill than when it was introduced into the Local Council. Passing over minor details, in respect of which there has been improvement, there have been inserted, for example, sections 26-D, 26-E and 26-F in place of sections 22 and 63 (b) of the Bill as introduced. These modifications follow the English law; and the powers of inspection and of prompt and effective intervention thus bestowed will enable the Local Government to exercise much more efficient control. And though an appeal will still lie to the Government of India, the provision for the suspension of action pending appeal has been very properly abandoned. Another instance of the improvement of the Bill in important respects is the action taken in the Select Committee to reduce the burden of work and responsibility laid upon the General Committee by the Bill as originally introduced.

12. On the other hand, the fears entertained by the Government of India as regards the institution of co-ordinate authorities and as to the possibility of friction resulting therefrom have been confirmed by changes which have been made in the Bill in the Select Committee, and by the opinions recorded by the Honourable Messrs. Narendra Nath Sen and Surendra Nath Banerjee in their Minute of Dissent. The powers of the Corporation over its officers and over the work of the General Committee have been very considerably increased by the provisions of sections 28-J, 57 and 66 regarding the appointment and leave of the officers, and by the provisions of sections 79, 95 and 126 regarding contracts, control and finance, as well as by several other provisions of perhaps minor importance. At the same time an unequivocal declaration has been made by the two members of the Local Council, who represent the opinions of the majority of the Corporation as constituted by the present Bill, that "an emasculated Corporation, but lately in possession of supreme power, must view with uneasiness, if not with positive jealousy, the creation of authorities, hitherto subordinate to it, but now rendered independent of it, in respect of the bulk of their powers and functions." The Government of India are not without alarm that the want of homogeneity already complained of may, if uncorrected, prejudicially affect the future success of the measure.

13. In these circumstances, the Government of India have carefully considered whether the Bill should receive their sanction in its present form, or whether it is susceptible (without any such radical reconstruction as would



produce general irritation and throw away the labours of the past year) of modifications either of principle or form which would meet the objections previously stated, and lessen, if not altogether remove, the possibilities of future friction. The Government of India have been struck, in their examination of the grounds advanced both by Sir Alexander Mackenzie and Sir John Woodburn for the measure, by the allegation that the existing Corporation has devoted itself to speech and to criticism rather than to action. This charge, while doubtless to some extent due to the temper and spirit in which it has approached its work, is in the main to be attributed to the considerable and, as it would seem excessive, numbers of the municipal body. Their numerical strength, when viewed in regard either to the number of electors by whom the majority are returned, or to the experience of municipal institutions elsewhere, seems to be disproportionately and unnecessarily large. There can be no reason why a number of voters returned as only 13,890 out of a total ward population estimated at about 650,000, or a proportion of little more than 2 per cent., should return as many as 50 members; or why the interests of a city even of over 681,000 inhabitants should require the services of 75 Commissioners for their proper protection. The Government of India are disposed, therefore, to think that a most effective, though hitherto unsuggested, check upon the abuses and anomalies complained of might be found in a reduction of the numerical strength of the Corporation.

14. Such a reduction might further enable the Government of Bengal to secure that more just and adequate representation of the various interests that compose the corporate life and wealth of Calcutta, which has been the avowed object of the promoters and supporters of the existing Bill, without presenting the illogicality of form, or producing the possible friction, associated with the measure now under discussion. It should be found, if possible, in a plan which would recognize, and constitute in some sort, an equality of balance between the two main interests and classes in the population of the city, viz., the European interest, largely preponderating in wealth and influence, and the Native interest, largely preponderating in numbers.

15. It will be remembered that already, at a very early stage in the history of this Bill, the Government of India had indicated a partiality for the Bombay model, as regards the constitution of the General Committee, and the numerical ratio existing between its constituent elements and those of the main body of the Corporation. Their attention has been recalled to this suggestion by a remarkable paragraph in the able Note of Dissent recorded by the two native members of the Select Committee who have most distinguished themselves by their frank and intelligent criticisms of the present Bill. It will be found that they there (paragraph 24 of their Note) throw out the following noteworthy suggestion:—

The constitutional part of the Bill, as we have already remarked, is largely modelled on the Bombay Act of 1888. But the fact is lost sight of, that while the Bombay Act is the natural outgrowth of the systems of municipal administration, previously in force in Bombay, the principles of that Act are entirely foreign to the spirit which has characterized the municipal legislation of Calcutta since 1863. Besides, the present Bill only partially borrows from the Bombay Act, incorporating some of its objectionable provisions, while all those which tend to popularize that system have been altogether left out. In the course of this Note we have pointed out how in certain important respects the provisions of the Bill differ from those of the Bombay Act, and we now propose to draw attention to some of the most prominent features of the Bombay Act which find no place in the present Bill. In Bombay the Corporation is the superior administrative body. It chooses its own President, who is the chief spokesman of the Municipality. The Standing Committee, corresponding to the General Committee under the Bill, is really a Committee of the Corporation, and not so merely in name, fully two-thirds of its members being elected by the Corporation. There is thus a solidarity of feeling among the majority of the members of the Standing Committee, who owe their position, and are responsible to one central authority, whose policy they are obliged to carry out with the utmost loyalty. The Standing Committee too elects its own Chairman, and the Municipal Commissioner, the Chief Executive Officer, is not even a member of either the Corporation or the Standing Committee. The Municipal Commissioner performs all executive work and carries out all orders of the superior administrative body. It is true he is appointed by Government, but the appointment is for a renewable period of three years, and his salary cannot be increased beyond Rs 2,500 a month except with the approval of the Corporation. Can any one say that this is the constitution that is proposed, for Calcutta under the Bill? We are no advocates of the Bombay system; but if it is at all to be given a trial in Calcutta, we are certainly of opinion that it will not do to borrow from it here and there, but that the system should be introduced into Calcutta in its entirety.

16. The Government of India are inclined to think that in this suggestion and in a more close adaptation of the Bombay model, might be found the solution for which they are seeking. I am desired, therefore, to submit, for the consideration of His Honour the Lieutenant-Governor, the following amended plan for the constitution of the reformed Corporation of Calcutta and of its Committees.

17. The Bombay Corporation is composed of two factors equal in numbers, and consisting respectively of members elected by the wards and of members appointed by the Government or elected by representative bodies. These two sections consist of 36 members each, or a total of 72. For the reasons already named, the Government of India are inclined to think that this total, which falls little short of the 75 hitherto allotted to Calcutta, is not required in the latter city in the interests either of adequate representation or of efficiency. They are the more disposed to take this view in the case of Calcutta, because any attempt to raise the strength of what may be described as the European element to the existing level of the Native element would not merely greatly augment total numbers, which are already in their opinion excessive, but would give to European interests a share in the numerical strength of the Corporation to which it is believed that they have no desire to lay claim; whilst if the Native proportion in the Corporation were diminished by 14, and the European proportion were increased by 11, so as to follow exactly the Bombay model, it is conceived that while the objection already stated would apply to the increase of the European section, serious exception would also be taken to a reduction of the Native element, which would either involve a radical reconstruction of the wards, or would call into existence an illogical and ill-balanced scheme of representation. I am accordingly to suggest that the future Calcutta Corporation should, like that of Bombay, consist of two equal factors, the strength of which should be determined by that of the moiety now returned by what are in the main European interests. In other words it is advised that the Corporation should be composed of 50 members, 25 being elected as now by the 25 wards into which the city is already divided, and 25 being partially nominated (as now) by the Government and partially elected (as now) by bodies representing commercial interests. The Bombay model would in this way be faithfully reproduced, though with smaller numbers, in Calcutta. There would be created a strict equality and balance of interest between the European and the Native elements. And, owing to the fact that no reconstitution of the existing wards would be required, and that the European element would continue to be constituted as at present, the change could be introduced with the minimum of friction and delay. In speaking, however, of the European element the Government of India must guard themselves against a possible misinterpretation of the phrase. For convenience sake the term may be employed and has here been employed by them. But they are well aware that the section of the Corporation of which they are speaking need not necessarily be exclusively European in its composition; since it is to the Bengal Government and to the power of nomination enjoyed by the latter that certain non-European and Native elements of the population of Calcutta must look for representation, in the event of their being unable to secure it under the existing method of election by wards. The Government of Bengal have never failed in this respect to consider the interests of the sections of the population here alluded to; and it is not unlikely that under the amended scheme which is now suggested, their good offices may be called into action in defence of non-European and Native interests, that might otherwise remain unrepresented in the remodelled Corporation. To this extent must a qualification be admitted in the use of the phrase which has been employed in this paragraph.

18. The Select Committee have already in section 89A followed the Bombay model in giving to the Corporation power to appoint Special Committees to consider matters which are reserved by law for decision by the Corporation, and to delegate such of their duties to such Committees. The Bill also provides in section 88 for the appointment of Sub-Committees by the General Committee. But I am desired specially to suggest that that model be more nearly followed in the constitution of the General Committee. They note the special approval with which the Honourable Messrs. Narendra Nath Sen and Surendra Nath Banerjee draw attention to that feature of the Bombay constitution which provides for the formation of what is there known as the Standing Committee. Their words are as follow:—"The Standing Committee, corte

sponding to the General Committee under the Bill, is really a Committee of the Corporation, and not so merely in name, fully two-thirds of its members being elected by the Corporation. There is thus a feeling of solidarity among the majority of the members of the Standing Committee, who owe their position and are responsible to one central authority, whose policy they are obliged to carry out with the utmost loyalty." The Government of India, who see much force in this argument, are disposed to recommend to His Honour the Lieutenant-Governor a similar procedure at Calcutta. They think that a General Committee, thoroughly representative both of the principal interests involved and of the larger Corporation, and qualified to discharge the important duties which it is proposed to place upon its shoulders, might be constituted by the nomination, as in Bombay, of one-third of its total number of 12 members by the Government and by the election of the remaining two-thirds by the Corporation itself.

19. The circumstances of Bombay, however, differ materially from those of Calcutta, in one respect, viz., in the numbers and strength of the various communities that compose the total population of the city, and are represented in the Municipal body. The Bengal Government will doubtless, therefore, find it desirable to suggest some plan that will secure to that proportion (two-thirds) of the General Committee which is to be elected by the entire Corporation a strictly fair and proportionate representation of the constituent elements of the electoral body. Otherwise it might be possible for either party, in the chances of voting, by a bare numerical majority, to swamp the General Committee, and to secure that the entire two-thirds proportion should be of their own political complexion or class. Such a result would be destructive of that fairer representation of interests which the Government of India, equally with Sir Alexander Mackenzie and Sir John Woodburn, desire to secure. And it would be fatal to the harmonious co-operation of all parties in the future, which they hope by this suggestion to produce.

20. I am also to suggest that it might be desirable to lay down rules for the appointment of the Special Committees and Sub-Committees which would secure their being truly representative, in respect of their constituent elements, of the Corporation or General Committee appointing them. The provisions regarding the making of rules and bye-laws for the conduct of the business of Special Committees and Sub-Committees under sections 89A and 590, in connection with sections 595 and 597, might be extended to include their constitution in general agreement with the principles already laid down. It might not be necessary or feasible for all such Special Committees and Sub-Committees to be homogenous in constitution with the body appointing them; but it is clear that in some cases at least such homogeneity alone would secure efficiency and obviate friction.

21. Such are the outlines of the revision of the existing scheme which, in the interests of the future efficient and orderly administration of Calcutta, the Government of India commend to the consideration of the Government of Bengal. No scheme that can be proposed will secure the unstinted approbation of all parties. The Bill already introduced has excited no small share of criticism. Exception can also doubtless be taken to the provisions of the suggested, or indeed of any other possible, modification of that Bill. The Government of India, however, who in framing these proposals have been actuated by a sincere desire to promote harmony equally with good government in the future, entertain the hope that there may henceforward be a truce to such dissension, and that the Bill as remodelled may be accepted by all classes in the spirit in which its modification has been discussed and put forward by them. For the successful municipal administration of a city like Calcutta, composed of such various and important interests, and with fortunes so momentous at stake, are required both a high standard of public duty on the part of those of its citizens who may be willing to enter its service, and the friendly and disinterested co-operation of every section of the community. Such a co-operation the Government of India confidently hope that His Honour the Lieutenant-Governor may look forward to receiving. That evils and abuses have grown up in the existing municipal system will not be disputed. That they stand in need of correction cannot be denied. It should be the aim of all parties so to apply or to accept this correction as to purge the reputation of the city, of which they are the guardians,

from the least stigma of reproach, and to vindicate the wisdom of the decision that twenty-three years ago first accorded the privileges of Local Self-Government to the capital of the Indian Empire.

No. 276T.—M., dated Darjeeling, the 3rd July 1899.

From—E. W. COLLIN, Esq., Offg. Secy. to the Govt. of Bengal, Municipal Dept.,  
To—The Secretary to the Government of India, Home Department.

I AM directed to acknowledge the receipt of your letter No. 93, dated the 17th June 1898, conveying the views of the Government of India on the subject of the Calcutta Municipal Bill.

2. It is pointed out in paragraph 9 of your letter that there is a want of correspondence, in constituent proportions, between the Corporation, which is to consist of 75 members, of whom 50 are to be elected by wards and 25 are to be selected by Government and bodies representing commercial interests, and the new General Committee, which is to consist of 12 members to be constituted in the opposite proportion of 8 from the 25 members selected by Government and commercial associations, and 4 from the 50 members elected by the wards. It is anticipated that this lack of proportion, and the divergent interests which it may be expected to create, will be liable to produce friction between the two bodies upon whose harmonious co-operation the future government of Calcutta must depend. It is also observed that the defects of the existing Corporation have been due to a great extent to the fact that the numbers of the Municipal body were excessive. It is therefore proposed to reduce the number of Commissioners, so that the future Calcutta Corporation should, like that of Bombay, consist of two equal factors; and in order to effect this object, it is suggested that the Corporation should be composed of 50 members, 25 being elected by the 25 wards into which the city is at present divided, and 25 being partially (as now) nominated by Government and partially elected by bodies representing commercial interests. With regard to the General Committee it is suggested that the Bombay model should again be followed, with certain reservations necessary on account of the special features of Calcutta, and that two-thirds of its members should be elected by the Corporation. The object of the reservations suggested above is to secure that the members of the General Committee, who are to be so elected, should constitute a strictly fair and proportionate representation of the constituent elements of the electoral body.

3. The Lieutenant-Governor desires me to acknowledge the courtesy with which the Government of India have discussed the solution, which they have presented to his consideration, for the future government of Calcutta. The solution is one which had of course been examined by himself in studying the manifold criticisms upon the scheme of the Municipal Bill, and the precedent and authority of the Bombay system assumed, undoubtedly, the greater prominence when the dissenters from the report of the Select Committee had declared their general adherence to it. The Lieutenant-Governor has not therefore been surprised that an adaptation of the Bombay system to the circumstances and conditions of Calcutta is commended to him by the Government of India.

4. With the Government of India, as it has always been with himself, the first consideration is the good government of Calcutta—the prompt and efficient discharge of the multifarious duties which the administration of so great a city involves. The adaptation of the Bombay system, which the Government of India propose, does not conflict with the arrangements which he considered to be necessary in Calcutta to that end, and he has no objections to offer to the settlement of the issue on the lines they recommend. The reasons which led him personally to prefer the maintenance of the present numbers of the Corporation have been publicly stated and were before the Government of India. They have held that these reasons are outweighed by the danger of friction in a Corporation, where the executive and managing committee is out of harmony with the main body. Sir John Woodburn has never concealed the force of these objections, and he will not press his personal



opinion on this point further against the deliberate conclusion of the Government of India.

5. With regard to the suggestions in paragraph 19 of your letter, that provision should be made to secure to the portion of the General Committee, which is to be elected by the Corporation, a proper representation of the constituent elements of the Corporation, he recognizes that such provision is necessary. The necessary amendment will accordingly be introduced into the Bill.



## WEATHER AND CROP REPORT.

For the week ending the 10th July 1899.

**Sardwan.**—Rainfall at Sadar 4.50, Kalna 3.55, Katwa 2.74, Raniganj 3.89. Weather seasonable. Transplanting of *aman* paddy going on briskly. Standing crops doing well. Fodder and water sufficient. Cattle-disease in Katwa decreased slightly. Common rice selling as follows:—

	Srs.			} per rupee.
Sadar	...	...	16 to 19	
Kalna	...	...	15	
Katwa	...	...	18	
Raniganj	...	...	17	

**Birbhum.**—Rainfall at Sadar 3.24, Rampur Hât 3.20. Weather rainy and hot. Sowing of seed and tillage going on. Price of common rice at Sadar and Rampur Hât 18 seers per rupee. Fodder sufficient. No cattle-disease.

**Bankura.**—Rainfall at Bankura 5.55, Vishnupur .88. Weather cloudy and rainy. Transplantation going on. Sugarcane growing. Fodder and water sufficient. No cattle-disease reported. Price of common rice at Bankura 17½ seers and at Vishnupur 17½ seers per rupee.

**Midnapore.**—Rainfall at Sadar 1.91, Tamluk 4.02, Ghatal .75. Weather seasonable. Transplantation going on. Prospects of sugarcane, jute and flax favourable. Cattle-disease reported from Chandrakona. Common rice selling as follows:—

	Srs.			} per rupee.
Sadar	...	...	14 to 20	
Tamluk	...	...	14½	
Ghatal	...	...	14 to 16	

**Hooghly.**—Rainfall at Sadar 7.92, Serampore 6.64, Jahanabad 2.60. Sowing of winter paddy going on. Excessive rain damaged jute and paddy. Cattle-disease in Sadar and Serampore. Common rice sells from 13 to 15 seers per rupee.

**Howrah.**—Rainfall at Sadar 5.77, Ulubaria 2.54. Weather cloudy with rain almost every day. Sowing of *aman* and *aus* still continues. Transplantation of *aman* going on. Some damage has been done to sugarcane and jute in Shingti outpost by floods. Paddy seedlings have also to some extent been damaged in places in Howrah and Ulubaria owing to recent excessive rain. Fodder and water sufficient. Common rice sells at 12 to 15 seers per rupee.

**24-Parganas.**—Rainfall at Sadar 6.92, Barasat 5.18, Basirhat 1.40, Diamond Harbour 6.79. Weather hot and rainy. Excessive rain is doing injury to *aus* and jute crops, and has retarded weeding operations. Transplantation of *aman* going on slowly. Cattle-disease reported from some parts of the Basirhat subdivision. Fodder and water sufficient. Common rice sells as follows:—

	Srs.			} per rupee.
Sadar	...	...	13½ to 16	
Barasat	...	...	16½	
Basirhat	...	...	18-4½ ch.	
Diamond Harbour	...	...	16	

**Nadia.**—Rain at Sadar 3.96, Kushtia 1.22, Chuadanga 1.65, Ranaghat 4.99. Weather hot and cloudy with occasional rain. Prospects of crops promising. Fodder and water sufficient. Price of common rice stationary.

**Murshidabad.**—Rain at Sadar 3.76, Jangipur 2.60, Kandi 2.08. Weather cloudy. Transplantation of *aman* still going on. *Bhadai* and jute plants doing well. Prospects of mulberry and indigo favourable. Paddy plants are under water in some parts of the Sadar subdivision. Fodder and water sufficient. Common rice sells as follows:—

	Srs.			} per rupee.
Sadar	...	...	16	
Kandi	...	...	18½	

**Jessore.**—Rainfall at Sadar 2·14, Jhenida ·75, Magura 1·73, Narail 1·76, Bangaon 1·76. Weather cloudy, rainy and occasionally hot. Weeding of *aus* and jute going on. Prospects of standing crops good except in the Jhenida, Magura, and Narail subdivisions, where insects are damaging them. Cattle-disease reported from thana Gaighata. Fodder and water sufficient. Common rice sells as follows:—

	Srs.	
Sadar	16 to 20	} per rupee.
Jhenida	16	
Magura	17 to 20	
Narail	20	
Bangaon	18	

**Khulna.**—Rainfall at Sadar 2·35, Bagirhat 1·64, Satkhira 2·94. Weather hot, cloudy and rainy. Cultivation for and transplantation of *aman* going on. Fodder and water sufficient. Cattle-disease reported from Rampal thana. Common rice sells as follows:—

	Srs.	
Sadar	19 to 23	} per rupee.
Bagirhat	19	
Satkhira	15 and 20 (coarse <i>aus</i> ).	

**Rajshahi.**—Rainfall at Sadar 3·83, Nator 2·15, Naugaon 3·95. Prospects of crops good. No cattle-disease. Fodder and water-supply plentiful. Rice sells from 16 to 22 seers per rupee.

**Dinajpur.**—Average rainfall 5·91. Weather seasonable. Transplantation of *haimanti* paddy has commenced. Weeding of *aus* and jute retarded by excessive rain. Cattle-disease reported from five thanas. Rice selling at 18 to 20 seers per rupee. Fodder and drinking-water sufficient.

**Jalpaiguri.**—Rainfall at Sadar 7·05, Alipur Duars 10·46. Weather hot and cloudy. *Bhadoi* paddy and jute doing well. *Haimanti* paddy being transplanted. Prospects good. Fodder and water sufficient. Common rice sells from 10 to 13 seers per rupee.

**Darjeeling.**—Rainfall at Darjeeling 6·94, Siliguri 4·92. Weather seasonable. *Hills*—*Bhutta*, *bhadoi* paddy, and *chota marua* promising well. *Terai*—Jute, *bhadoi*, and sugarcane doing well; prospects good; *haimanti* paddy not yet transplanted. Coarse rice sells as follows:—

	Srs.	
Hills	9 to 13	} per rupee.
Terai	16 to 18	

*Bhutta* sells at Darjeeling 24 seers and at Kalimpong 40 seers per rupee.

**Rangpur.**—Rainfall at Sadar 5·64, Gaibanda 3·56, Kurigram 4·60, Nilphamari 8·47. Weather rainy. Cutting of *aus* and transplanting of winter rice going on. Prospects good. Common rice selling from 16 to 22 seers per rupee. Fodder and water sufficient. Cattle-disease reported from some villages in thana Jaldhaka.

**Bogra.**—Average rainfall 3·70. Prospects good. Cultivation of land for *aman* still continues. Transplantation has begun. Common rice sells from 17 to 23 seers per rupee. Fodder and water ample.

**Pabna.**—Rainfall at Sadar 2·76, Sirajganj 1·43. Weather cloudy and rainy. Crops on low lands damaged in places, but otherwise prospects good.

**Dacca.**—Rainfall at Sadar 1·41, Manikganj 3·60, Munshiganj 1·51, Narainganj 2·18. Weather seasonable. Prospects of crops fair. Insects are destroying paddy and jute in the Sadar and Munshiganj subdivisions. In Manikganj *aus* paddy has been damaged in low lands by sudden rise of flood-water. Fodder available. No cattle disease. Price of common rice 16 to 19 seers per rupee.

**Mymensingh.**—Rainfall at Sadar 3·81, Kishorganj 3·79, Tangail 1·87, Netrokona 6·12, Jamalpur 3·65. Weather showery. Prospects of crops excellent. Condition of cattle good. Fodder and water ample. Common rice sells as follows:—

	Srs.	
Sadar	20	} per rupee.
Kishorganj	20	
Tangail	18	
Netrokona	24	

**Faridpur.**—Rainfall at Sadar 1·55, Goalundo 3·34, Madaripur 1·19. Weather season-  
able. State and prospects of standing crops good. Common rice selling at 17 to 18  
seers per rupee.

**Backergunge.**—Rainfall at Sadar 3·64. Weather seasonable. Prospects of crops fair.  
Common *aman* rice sells from 13 to 21 seers per rupee.

**Tippera.**—Rainfall at Sadar 5·42, Brahmanbaria 2·53, Chandpur 1·55. Weather  
seasonable. Standing crops doing well. *Aus* and jute beginning to be reaped in Brahman-  
baria. Average price of common rice 19 seers per rupee.

**Noakhali.**—Rainfall at Sadar 3·42, Feni 2·14. Prospects of standing crops fair.  
Fodder sufficient. Price of rice stationary.

**Chittagong.**—1·55. Weather seasonable. Cultivation of *aus* in progress. Prospects  
fair. Prices stationary. Water and fodder sufficient.

**Patna.**—Rainfall at Sadar 2·95, Barh 1·11, Bihar 2·74, Dinapore 2·92, Bikram 2·78,  
Hilsa 4·50. *Makai* still being sown, but more rain will be injurious to this crop. Trans-  
plantation of *marua* almost completed. Paddy sowing going on. No cattle-disease.  
Fodder and water for cattle sufficient. Common rice in Patna sells at 19 seers per rupee.

**Gaya.**—Rainfall at Sadar 1·88, Jahanabad 1·73, Aurangabad 1·31, Nawada 4·61.  
Transplantation of *marua* millet and sowing of paddy going on. *Bhadoi* injured a little by  
excessive rain. Common rice selling at 16 seers per rupee.

**Shahabad.**—Rainfall at Sadar 3·22, Buxar 5·12, Bhabua 6·73, Sasaram 3·70. *Bhadoi*  
and paddy sowing going on; those sown are coming on well. Sugarcane in Buxar reported  
to be damaged by heavy rain. Fodder and water sufficient. Cattle-disease reported from  
four villages in the Sasaram subdivision.

**Saran.**—Rainfall at Sadar 3·94, Siwan 1·30, Gopalganj 3·63. Weather showery.  
General prospects good. Weeding of *bhadoi* going on. Transplantation of paddy begun.  
Average price of common rice 14·12 seers and of *makai* 24·12 seers per rupee.

**Champaran.**—Rainfall at Motihari 2·25, Bettiah 4·62, Barharwa 3·13, Bagaha 3·35,  
Ramnagar 1·58. *Bhadoi* sowings nearly finished and germinating well. Paddy trans-  
plantation going on. Prospects good. Weeding retarded by rain. *Makai* and indigo  
suffered somewhat from heavy rainfall. Price of common rice 13½ seers and of maize 22½  
seers per rupee.

**Muzaffarpur.**—Rainfall at Sadar 13·34, Hajipur 2·51, Sitamarhi 4·40. A few days'  
sunshine is urgently required to facilitate the weeding of the *bhadoi* crop; otherwise  
prospects good. Prices are—Common rice 12 to 15 seers, wheat 16 to 18 seers, barley  
23 to 24 seers, *makai* 23 to 24 seers, gram 22 to 23 seers, and *rahar* 20 to 21 seers per rupee.

**Darbhanga.**—Weather cloudy and rainy. Rainfall at Sadar 6·09, Samastipur 3·82,  
Madhubani 3·98. Sowing of *bhadoi* almost completed. Transplantation of paddy has  
commenced. *Makai* and *marua* doing well. Common rice selling at Sadar 13½ seers per  
rupee. Fodder and water sufficient.

**Monghyr.**—Rainfall at Monghyr 3·57, Begusarai 4·7, Jamui 2·36. Weather season-  
able. Transplantation of *marua* commenced. *Bhadoi* and paddy sowings continue. Weed-  
ing of *bhadoi* commenced in places. Prospects generally good. Common rice sells as  
follows:—

	Srs.			} per rupee.
Monghyr	...	...	13 to 16	
Begusarai	...	...	12 to 15	
Jamui	...	...	16	

**Bhagalpur.**—Weather wet and cloudy. Rainfall at Sadar 2·44, Banka 4·00, Madhi-  
pura 3·03, Supaul 2·57. Transplantation of paddy going on briskly. Sowings are in full  
progress except in Banka, where they are a little retarded by the heavy rain. Common rice  
sells at 15½ seers per rupee.

**Purnea.**—Rainfall at Sadar 6·26, Kishanganj 7·09, Araria 1·54. Weather rainy.  
Excessive rainfall retarded growth of paddy, jute and sugarcane. Transplantation of *aghani*  
on high lands going on. Dry weather much needed. No cattle-disease. Fodder and water  
sufficient. Common rice sells as follows:—

	Srs.			} per rupee.
Sadar	...	...	15	
Kishanganj	...	...	15	
Araria	...	...	16	

**Malda.**—Rainfall at Sadar 5·88, Chanchal 7·77, Gajole 5·30. Weather hot and cloudy with frequent showers of rain. Transplanting of winter rice commenced in places. *Bhadoi* paddy and jute thriving well. Common rice sells at 18 seers per rupee.

**Sonthal Parganas.**—Average rainfall 3·76. All crops doing well, but Indian-corn needs fair weather. Indigo being cut in Rajmahal. Price of rice 14 to 18 seers, and of maize 20 to 30 seers per rupee. Cattle-disease in Rajmahal.

**Cuttack.**—Rainfall at Sadar 4·05, Jajpur '90, Banki 1·92. Weather seasonable. *Sarad*, jute and sugarcane growing. *Beali* being weeded and harrowed. Condition of cattle generally good. Fodder and water sufficient. Common rice sells as follows:—

				S.	ch.	
Cuttack	...	...	...	17	1	} per rupee.
Jajpur	...	...	...	17	1	
Banki	...	...	...	17	15	

**Balasore.**—Rainfall at Sadar 3·12. Sugarcane thriving well. *Beali* and *sarad* growing well, latter being reploughed. Rice sells from 16 to 24 seers per rupee in the interior, and at 17 seers per rupee at Balasore and Bhadrak. Cattle-disease prevailing in ohakla Singla. Fodder and water sufficient.

**Angul.**—Rainfall at Sadar 1·63, Bisipara 1·12. Weather seasonable. *Bhadoi* and winter paddy seedlings doing well. Common rice selling at 24 seers per rupee in Angul and 15 seers at Bisipara. Condition of cattle generally good; but cattle-disease reported from some places.

**Puri.**—Rainfall at Sadar '94, Khurda 1·44. Young plants of *sarad* and *mandia* growing well. *Buli* being harrowed. Sugarcane and other miscellaneous crops promise well. Fodder and water sufficient. Cattle-disease continues. Price of common rice stationary.

**Hazaribagh.**—Rainfall at Sadar 5·35, Giridih 3·90. Weather seasonable. Ploughing and sowing in progress. Prospects of sugarcane good. Common rice sells from 15 to 20 seers per rupee.

**Ranchi.**—Rainfall 3·53. Weather seasonable. Sowing of paddy continues. Rice sells at Ranchi 15 seers and in the interior from 16 to 21 seers per rupee. Fodder and water plentiful.

**Palamau.**—Rainfall 4·86. Weather cloudy. *Bhadoi* sowing going on. Sugarcane doing well. Rice selling at 16 seers per rupee.

**Manbhum.**—Rainfall at Sadar 3·29, Gobindpur 1·93. Weather seasonable. Prospects of crops generally good. Cattle-disease reported from thana Jhalda. Fodder and water sufficient. Average price of common rice at Sadar 18½ seers and at Gobindpur 17 seers per rupee. Supply sufficient.

**Singbhum.**—Rain 2·98. Prospects good. Transplantation going on. Rice sells from 16 to 20 seers per rupee.

**General Summary.**—The rainfall during the week has been general and heavy. Cultivation of winter rice is in active progress, but a cessation of rain is now generally required. Owing to excessive rain the young crops in the ground are reported to be suffering in several places and weeding is retarded. In Dacca and Jessore the insects are still damaging the rice and jute plants. There is ample supply of fodder in every district, but reports of cattle-disease continue to be received from many districts. Prices are practically stationary, the variations reported being very slight and confined to a few districts.

By order of the Lieutenant-Governor of Bengal,

F. A. SLACK,

Offg. Secretary to the Govt. of Bengal.

REVENUE DEPARTMENT,

The 11th July 1899.

## STOCKS OF RICE IN AND AROUND CALCUTTA.

No. 474 Statistics.—The following is published for general information.

F. A. SLACK,  
Offg. Secy. to the Govt. of Bengal.

Statement showing the Stocks of Rice in and around Calcutta during July 1899.

STOCK IN HAND AS COMPILED ON--													
NAMES OF MARKS.	1st week of July 1899.	1st week of August 1899.	1st week of Sept. 1899.	1st week of Oct. 1899.	1st week of Nov. 1899.	1st week of Dec. 1899.	1st week of Jan. 1899.	1st week of Feb. 1899.	1st week of March 1899.	1st week of April 1899.	1st week of May 1899.	1st week of June 1899.	1st week of July 1899.
Ballyghata	Mds. 7,59,000	4,73,000	2,37,000	3,53,500	1,77,000	1,80,000	2,13,000	2,41,000	6,30,000	Mds. 6,83,000	Mds. 7,13,000	Mds. 8,11,000	Mds. 7,73,000
Ultadanga	" 46,500	46,500	60,500	63,500	64,000	68,000	66,500	65,500	75,000	" 75,500	" 77,500	" 77,000	" 70,000
Chitpur, Golabari, Kumar- tooly, Hatibola, and Oulpi Ghat.	" 2,94,000	2,31,400	2,08,500	2,53,000	2,97,000	2,60,000	2,53,500	2,95,000	3,95,000	" 3,48,500	" 3,33,500	" 2,16,500	" 2,60,000
Palmringhata, Pocha, and Jorabagan.	" 2,000	2,100	2,000	2,900	3,500	3,000	1,900	5,000	3,300	" 4,000	" 2,500	" 2,700	" 3,000
Tallypang, Chetla, Kidderpore, and Mumbaganj.	" 1,16,000	1,11,000	1,10,400	1,08,300	1,09,000	90,900	1,22,000	1,30,700	1,75,000	" 1,59,000	" 1,55,000	" 1,70,000	" 1,73,000
Minor bazars (1)	" 2,46,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	" 2,40,000	" 2,40,000	" 2,40,000	" 2,40,000
Other retail shops (1)	" 3,50,000	3,50,000	3,50,000	3,50,000	3,50,000	3,50,000	3,50,000	3,50,000	3,50,000	" 3,50,000	" 3,50,000	" 3,50,000	" 3,50,000
Bamkripur	" 84,700	87,300	75,000	81,000	83,500	80,500	90,700	1,09,000	1,37,300	" 1,43,000	" 1,33,000	" 1,34,000	" 94,500
Seldyball, Nawabganj, Bha- drabar, and Chandernagore.	" 1,914	2,027	2,455	1,633	17,308	19,806	22,697	14,356	13,778	" 1,367	" 1,894	" 1,573	" 800
Total	17,54,514	14,13,287	13,36,956	15,43,733	12,41,708	11,63,996	13,14,527	13,46,056	15,83,376	19,13,287	19,67,394	20,33,573	19,64,309
On Railway premises on both sides of the river.	8,440 (on 3rd July 1899.)	12,546 (on 3rd August 1899.)	5,394 (on 3rd Sept. 1899.)	8,526 (on 3rd October 1899.)	5,146 (on 3rd Nov. 1899.)	13,338 (on 3rd Dec. 1899.)	22,304 (on 3rd Jan. 1899.)	16,346 (on 3rd Feb. 1899.)	35,003 (on 3rd March 1899.)	19,324 (on 3rd April 1899.)	5,438 (on 3rd May 1899.)	4,099 (on 3rd June 1899.)	886 (on 3rd July 1899.)
On boats not yet unloaded-- By Port Commissioners' returns.	25,319 (1st to 3rd July 1899.)	21,739 (1st to 3rd August 1899.)	20,557 (1st to 3rd Sept. 1899.)	23,329 (1st to 3rd October 1899.)	26,894 (1st to 3rd Nov. 1899.)	33,350 (1st to 3rd Dec. 1899.)	37,842 (2nd to 4th Jan. 1899.)	63,146 (1st to 3rd Feb. 1899.)	47,003 (1st to 3rd March 1899.)	46,859 (1st to 3rd April 1899.)	34,938 (1st to 3rd May 1899.)	33,100 (1st to 3rd June 1899.)	30,876 (1st to 3rd July 1899.)
By Canal returns	7,413 (1st to 3rd July 1899.)	7,225 (1st to 3rd August 1899.)	23,460 (1st to 3rd Sept. 1899.)	24,094 (1st to 3rd October 1899.)	49,939 (1st to 3rd Nov. 1899.)	50,191 (1st to 3rd Dec. 1899.)	81,553 (2nd to 4th Jan. 1899.)	1,02,398 (1st to 3rd Feb. 1899.)	33,706 (1st to 3rd March 1899.)	41,311 (1st to 3rd April 1899.)	30,944 (1st to 3rd May 1899.)	32,697 (1st to 3rd June 1899.)	32,366 (1st to 3rd July 1899.)
Grand total of Stocks	17,70,003	14,64,866	13,66,206	15,81,863	12,92,139	12,44,376	14,56,081	15,37,946	19,06,139	20,30,348	20,00,309	20,04,147	19,51,639

\* This mart is in the Howrah district, and the figures have been obtained by local enquiry.  
 † Figures furnished by the Collector of Hooghly.  
 ‡ Ditto by the Railway authorities.  
 (1) Estimated as a constant quantity.

STATISTICAL DEPARTMENT,  
The 11th July 1899.F. A. SLACK,  
Offg. Secy. to the Govt. of Bengal.



## PRICES-CURRENT (retail) of Food-grains and Salt in the Head-

Number.		DISTRICTS.	QUANTITIES PER RUPEE IN														
			WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			JOWAR OR CHOLU. (Sorghum Vulgare.)		
			Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
BENGAL.		S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	
BURDWAN DIVISION.	1	Bardwan	20 0	20 0	12 4	...	...	...	14 0	18 0	10 8	16 8	16 8	12 0	...	...	...
	2	Birbhum	17 4	16 8	12 0	...	...	...	15 0	15 0	9 12	18 0	18 0	12 0	...	...	...
	3	Bankura	16 0	16 0	12 0	...	...	...	12 8	13 4	11 4	17 8	18 12	14 0	...	...	...
	4	Midnapore	17 0	15 0	10 0	...	...	...	12 0	12 0	10 0	17 0	16 0	12 8	...	...	...
	5	Hooghly	14 0	14 0	10 0	...	...	...	8 0	8 0	7 8	15 0	14 0	11 12	...	...	...
	6	Howrah	...	...	...	...	...	...	12 8	13 12	9 0	15 0	16 0	11 0	...	...	...
FARRUKHABAD DIVISION.	7	94-Parganas	...	...	...	...	...	...	10 8	10 4	8 0	13 4	14 0	10 0	...	...	...
	8	Calcutta	18 0	18 0	10 10	17 12	17 12	14 8	8 0	8 0	7 4	12 4	12 4	10 10	17 12	17 12	16 0
	9	Nadia	17 12	17 4	11 18	29 1	30 7	14 9	7 4	7 9	6 0	15 9	15 9	11 7	...	...	...
	10	Murshidabad	Jamali 19 0 Gangajali 16 0	19 0 18 0	18 0	32 0	32 0	22 0	14 0	15 0	10 0	16 8	16 8	12 4	...	...	...
	11	Jessore	18 0	18 0	10 0	14 0	14 0	10 0	11 12	12 0	10 4	19 0	18 0	12 4	...	...	...
	12	Khulna	...	...	...	...	...	...	14 0	14 0	10 14	20 0	18 0	12 14	...	...	...
RAJSHAH DIVISION.	13	Rajshahi	18 12	18 12	13 8	30 0	30 0	20 0	13 8	14 4	6 0	16 8	18 0	11 10	...	...	...
	14	Dinajpur	19 0	19 0	13 0	17-12-3	17-12-3	...	11 4	11 4	9-9-3	16 12	16 12	13 0	...	...	...
	15	Jalpaiguri	18 0	18 0	10 0	...	...	...	5 0	5 0	5 0	15 0	15 0	12 0	...	...	...
	16	Darjeeling	8 0	8 0	7 0	10 0	9 0	8 0	5 8	5 8	5 4	13 0	13 0	11 0	...	...	...
	17	Rangpur	12 8	12 8	8 0	...	...	...	9 0	9 0	7 0	17 0	17 0	11 0	...	...	...
	18	Bogra	14 0	14 0	13 8	...	...	...	14 0	14 0	7 8	21 12	21 12	12 0	...	...	...
DACA DIVISION.	19	Pabna	18 12	18 12	12 12	35 0	35 0	32 8	7 0	7 0	6 0	16 8	18 0	11 4	...	...	...
	20	Dacca	14 0	14 0	11 8	32 0	32 0	18 4	13 0	13 0	9 4	19 0	19 0	10 0	...	...	...
	21	Mymensingh	13 8	13 8	8 0	10 0	10 0	...	16 0	16 0	8 0	20 0	20 0	10 0	...	...	...
	22	Faridpur	21 0	20 0	...	...	20 0	...	5 8	5 8	5 6	18 0	18 0	10 0	...	...	...
	23	Backergunge	...	...	...	...	...	...	14 8	14 0	10 0	15 12	15 8	10 12	...	...	...

- A. In the subdivisions the retail prices of salt per rupee are:—Kalna 10 seers 10 chittacks (karkatch); Raniganj 10½ seers (panga); Katwa 10 seers 15 chittacks (karkatch); Raniganj 10½ seers (panga).
- B. At Rampur Hat the retail price of salt is 10½ seers per rupee.
- C. At Vishnupur the retail price of salt is 9½ seers per rupee.
- D. In the subdivisions the retail prices of salt per rupee are:—Contai 9 seers; Tamluk 10½ seers; Ghatal 11 seers 7 chittacks.
- E. In the subdivisions the retail prices of salt per rupee are:—Serampore 10 seers; Jahanabad 10½ seers.
- F. At Ulubaria the retail price of salt is 10 seers 10½ chittacks per rupee.
- G. In the marts in the interior of the district the retail prices of salt per rupee are:—Chetla 11 seers; Baranati 11 seers 6 chittacks; Baduria 10 seers 11 chittacks; Magrahat 10 seers 10 chittacks.
- H. In the subdivisions the retail prices of salt per rupee are:—Kushtia (Bahadurkhal) 11½ seers; Chundanga 12 seers 13 chittacks; Meherpur 10 seers; Ranaghat 10½ seers.
- I. In the subdivisions the retail prices of salt per rupee are:—Lalbagh 10½ seers; Jangipur 10 seers; Kandi return not received.
- J. In the subdivisions the retail prices of salt per rupee are:—Jhenida 10 seers; Magura 9½ seers; Narail 10 seers; Bangson 10 seers 10 chittacks.

BEERS OF 80 TOLANS.

[illegible]

GRAM, CHANA, CHHOLA, KADALAY, OR SUNAGA. ( <i>Cicer arietinum.</i> )			INDIAN-CORN OR MAIZE. ( <i>Zea mays.</i> )			ARHAR OR THUR, CADJAN PEA. ( <i>Cajanus indicus.</i> )		
Present return.	Next preceding re- turn.	Corresponding re- turn of last year.	Present return.	Next preceding re- turn.	Corresponding return of last year.	Present return.	Next preceding re- turn.	Corresponding return of last year.
S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.
21 9	21 0	16 0	...	...	...	13 0	13 0	11 13
22 8	22 0	16 0	...	...	...	12 0	12 0	...
15 0	15 0	14 0	...	...	...	12 8	13 12	12 0
20 0	21 0	10 8	...	...	...	12 0	12 8	...
18 0	17 0	14 0	...	...	...	11 0	10 0	8 0
16 0	16 0	12 4	...	...	...	11 8	11 8	11 4
18 4	18 4	12 4	...	...	...	13 4	13 4	11 0
17 12	17 12	14 8	...	...	16 0	13 0	13 0	11 4
30 7	29 1	16 13	...	...	...	12 5	12 7	...
28 0	28 0	18 0	...	...	...	13 0	13 0	...
20 0	20 0	18 4	...	...	...	13 0	11 0	...
20 0	20 0	10 14	...	...	...	11 0	11 0	10 8
28 2	28 2	19 8	...	...	...	20 10	20 10	21 12
24 0	21 0	16 0	...	...	...	11 4	10-10-8	...
18 0	18 0	13 0	...	...	...	12 0	12 0	10 0
13 0	13 0	10 8	26 0	24 0	18 0	8 7	8 0	6 0
20 0	20 0	12 0	24 0	24 0	16 0	9 0	9 0	7 4
22 8	22 8	17 1	...	...	...	16 14	16 14	...
24 0	24 0	15 12	...	...	...	12 8	12 8	11 0
14 4	14 4	11 8	...	...	...	13 0	13 0	10 8
20 0	20 0	8 0	...	...	...	10 8	10 8	5 8
26 0	25 0	15 0	...	...	...	...	...	...
15 0	15 0	13 4	...	...	...	...	...	...

## quarters Station Bazars of the Districts of Bengal on the 30th June 1899.

WHOLESALE PRICES PER MAUND OF 40 SEERS.						AVERAGE WAGES PER MONTH.												DISTRICTS.	Number.
SALT.			SALT.			UNSKILLED LABOUR— ABLE-BODIED AGRICULTURAL LABOURER.			STONOR HORSE- KEEPER.			SKILLED LABOUR— COMMON MASON, CARPENTER OR BLACKSMITH.							
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.		
S. Ch.	S. Ch.	S. Ch.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	BENGAL.	
A	12 4	12 4	Crushed.	3 4 0	3 10 0	8 0	8 0	7 0	6 0	6 4	6 0	14 0	13 4	13 0				Burdwan.	1
B	10 8	10 8	Karkatch.	3 10 6	4 1 6	6 0	6 0	6 0	4 0	4 0	4 0	10 0	15 0	15 0				Birbhum.	2
C	10 0	10 0		4 0 0	4 0 0	7 8	7 8	7 8	6 0	6 0	6 0	12 0	12 0	12 0				Bankura.	3
D	11 0	11 0	Panga.	3 8 0	4 6 0	8 8	10 0	10 0	7 8	7 8	7 8	12 0	12 0	12 0				Midnapore.	4
E	10 0	10 0	Crushed.	3 8 0	3 12 0	...	11 4	10 0	...	7 0	7 0	...	14 0	12 0				Hooghly.	5
F	10 8	10 8		3 8 0	3 10 0	12 0	12 0	15 0	9 0	9 0	10 0	16 0	16 0	20 0				Howrah.	6
G	11 0	11 0		3 6 0	3 8 0	10 0	9 6	9 6	7 0	7 0	7 0	15 0	15 0	15 0				24-Pargannas.	7
H	11 0	11 0	Panga.	3 6 0	3 7 0	10 0	10 0	10 0	8 0	8 0	8 0	18 0	18 0	18 0				Calcutta.	8
I	11 10	11 10	Panga.	3 7 0	3 12 0	7 8	7 8	7 8	6 0	6 0	7 0	20 0	20 0	20 0				Nadia.	9
J	10 8	9 0	Karkatch.	3 8 0	3 10 0	4 0	4 0	4 0	5 0	5 0	5 0	12 0	12 0	12 0				Murshidabad.	10
K	9 2	9 6	Panga.	3 14 0	4 2 0	9 6	9 6	6 0	6 0	6 0	6 0	14 0	14 0	14 0				Jessore.	11
L	10 0	10 0	Panga.	3 12 0	3 12 0	7 8	9 8	9 6	7 0	7 0	7 0	15 0	10 0	10 0				Khulna.	12
M	9 12	9 12	Panga.	3 13 4	4 4 0	...	3 0	5 0	...	4 0	4 0	...	5 0	7 8				Rajshahi.	13
N	10 0	10 0	Panga.	4 0 0	3 14 0	...	7 0	6 0	...	7 0	6 0	...	20 0	20 0				Dinajpur.	14
O	10 0	10 0	Panga.	3 11 0	3 12 0	7 8	7 8	7 8	8 0	8 0	8 0	15 0	15 0	15 0				Jalpaiguri.	15
P	8 8	8 0	Panga.	5 0 0	5 0 0	8 0	8 0	8 0	8 0	8 0	8 0	20 0	20 0	20 0				Darjeeling.	16
Q	9 0	8 0	Rora.	5 0 0	5 0 0	9 0	9 0	9 0	10 0	10 0	10 0	30 0	30 0	30 0				Rangpur.	17
R	9 0	9 0	Panga.	4 0 0	4 0 0	7 8	7 8	7 8	6 0	7 8	7 0	15 0	15 0	15 0				Bogra.	18
S	8 1	8 1	Panga.	3 18 4	4 2 4	...	7 8	7 8	...	5 0	5 0	...	10 0	10 0				Pabna.	19
T	9 12	9 12	Panga.	3 14 0	3 14 0	5 0	5 0	5 0	6 0	6 0	6 0	7 0	7 0	7 0				Dacca.	20
U	10 0	10 0	Panga.	3 9 0	4 0 0	5 0	5 0	5 0	5 0	5 0	5 0	10 0	10 0	10 0				Mymensingh.	21
V	10 0	10 0	Panga.	4 0 0	4 0 0	7 0	7 0	7 8	7 0	8 0	8 0	14 0	14 0	14 0				Faridpur.	22
W	10 0	10 0	Panga.	3 14 0	4 0 0	9 0	8 0	8 0	8 0	7 0	7 0	15 0	8 0	10 0				Backergunge.	23
X	10 0	10 0	Panga.	3 10 0	3 12 0	8 0	10 0	12 0	10 0	10 0	10 0	20 0	20 0	20 0					

K. In the subdivisions the retail prices of salt per rupee are:—Bagerhat 10 seers; Salkhira 11 seers.

L. In the subdivisions the retail prices of salt per rupee are:—Nator 11 seers; Naugaon 9 seers 10 chittacks.

M. In the Alipur Duars the retail price of salt is 8 seers per rupee.

N. Retail price of salt (panga) at Kurmoo and Siliguri is 8 seers per rupee.

O. In the subdivisions the retail prices of salt per rupee are:—Gaibanda 10 seers; Kurigram 8 seers; Nilphamari 10 seers.

P. At Sirajganj the retail price of salt is 11 seers per rupee.

Q. In the marts in the interior of the district the retail prices of salt per rupee are:—Madanganj 11 seers 7 chittacks; Manikganj 9 seers; Munshirhat 11 seers 7 chittacks; Mirkadin 11 seers 13 chittacks.

R. In the subdivisions the retail prices of salt per rupee are:—Kishorganj 10 seers; Jamalpur 10 seers; Kagnari 8 seers; Netrokona 8 seers.

S. In the subdivisions the retail prices of salt per rupee are:—Goalundo 10 seers; Madaripur 10 seers.

T. In the subdivisions the retail prices of salt per rupee are:—Pirojpur 8 seers; Patuakhali 9 seers; Bhola 9 seers.

## PRICES-CURRENT (retail) of Food-grains and Salt in the Head-quarters

Number.		DISTRICTS.	QUANTITIES PER RUPEE IN														
			WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			JOWAR OR OHOLUM (Sorghum Vulgare).		
			Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
BENGAL—concluded.			S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.
CHITTAGONG DIVISION.	24	Tippura ..	...	...	...	...	...	...	10 0	10 0	8 0	18 2	17 1	9 8	...	...	...
	25	Noakhali ..	...	...	...	...	...	...	12 0	11 0	9 0	17 0	16 0	10 0	...	...	...
	26	Chittagong ..	...	...	...	...	...	...	12 8	12 8	9 0	14 8	14 8	10 8	...	...	...
BIHAR.																	
PATNA DIVISION.	27	Patna ..	20 8	21 0	17 0	23 0	29 0	24 0	14 0	14 8	12 0	19 0	20 0	14 8	35 0	40 0	26 0
	28	Gaya ..	18 8	19 0	14 0	32 8	30 0	22 0	10 0	9 4	8 0	17 0	17 0	14 0	19 0	20 0	17 8
	29	Shahabad ..	{ 18 0 & 19 0 }	18 0	14 0	28 0	26 0	22 0	{ 8 0 to 10 0 }	{ 8 0 & 9 0 }	6 8	{ 18 0 to 17 8 }	{ 13 0 to 18 0 }	{ 11 0 to 14 0 }	...	...	...
	30	Saran ..	17 8	17 8	15 4	26 0	26 0	28 0	8 0	8 0	8 0	15 0	15 0	12 8	...	...	...
	31	Champanan ..	16 8	16 0	16 0	24 0	25 0	25 8	7 0	6 8	6 8	13 8	12 8	12 0	...	...	...
	32	Muzaffarpur ..	16 0	16 0	16 0	24 0	25 0	23 0	7 0	7 0	7 0	13 0	13 0	13 0	...	...	...
BHAGALPUR DIVISION.	33	Darbhanga ..	16 0	17 0	12 0	21 0	21 0	20 0	9 8	8 12	6 8	11 8	12 0	11 0	...	...	...
	34	Munghyr ..	21 0	21 8	15 7½	32 0	...	...	11 0	11 10	6 13½	18 0	14 0	12 0	...	...	...
	35	Bhagalpur ...	17 12	17 12	16 4	28 0	28 0	24 4	12 10	12 10	11 6	16 8	16 8	13 14	...	...	...
	36	Purnea (Kasba)	19 0	20 0	16 0	...	...	...	13 0	13 0	12 8	15 0	16 0	15 0	...	...	...
	37	Maida (English Bazar).	21 0	20 0	14 0	...	...	...	11 0	11 0	8 0	16 0	16 0	11 0	...	...	...
	38	Sonthal Parganas.	18 8	18 8	10 0	24 0	24 0	17 0	13 0	13 0	9 0	18 0	18 0	13 0	...	...	...
ORISSA.																	
ORISSA DIVISION.	39	Cuttack ..	15 2	15 2	9 8	...	...	...	10 8	10 8	10 8	16 7	15 12	13 2	...	...	...
	40	Balasore ..	16 0	16 0	13 0	13 0	13 0	10 0	13 0	13 0	11 0	17 0	17 0	13 8	...	...	...
	41	Puri ..	12 0	12 0	8 6	...	...	...	7 14	9 8	6 9	15 12	18 6	11 18	...	...	...
CHOTA NAGPUR.																	
CHOTA NAGPUR DIVISION.	42	Hazaribagh ..	16 0	15 0	12 8	26 12	17 4	17 0	8 0	8 0	8 0	15 8	17 4	12 0	...	...	...
	43	Ranchi ...	{ 7 8 to 15 0 }	{ 8 8 to 12 8 }	{ 6 0 to 11 0 }	18 0	19 0	14 0	{ 8 0 to 13 0 }	{ 8 0 to 13 0 }	{ 8 8 to 9 0 }	{ 16 0 to 18 0 }	{ 16 0 to 18 0 }	{ 10 8 to 11 0 }	...	...	...
	44	Palamau ...	14 10	18 0	15 12	23 10	23 10	23 10	14 10	14 10	11 13	15 12	15 12	12 15	...	...	...
	45	Manbhum ...	14 0	15 0	12 0	24 0	32 0	13 0	12 8	12 8	10 0	19 0	20 0	13 0	...	...	...
	46	Singbhum ...	14 0	14 0	8 0	...	...	...	16 0	16 0	12 0	20 0	20 0	14 0	...	...	...

U. In the subdivisions the retail prices of salt per rupee are:—Brahmanbaria 10 seers; Chandpur 9 seers.

V. At Feni Hat the retail price of salt is 9 seers per rupee.

W. At Cox's Bazar the retail price of salt is 8½ seers per rupee.

X. In the subdivisions the retail prices of salt per rupee are:—Barh 10½ seers; Bihar 9½ seers; Dinapore return not received.

Y. In the subdivisions the retail prices of salt per rupee are:—Jahanabad 10 seers; Nawada 9 seers; Aurangabad 10 seers.

Z. In the subdivisions the retail prices of salt per rupee are:—Buxar 11 seers; Bhabua 10 seers; Sasaram 10½ seers.

a. In the subdivisions the retail prices of salt per rupee are:—Siwan 12 seers 2 chittacks; Gopalganj (Minganj) 12½ seers.

b. At Bettiah the retail price of salt is 10 seers per rupee.

c. In the Hajipur and Sitamarhi subdivisions the retail price of salt is 10 seers per rupee.

d. In the Samastipur and Madhubani subdivisions the retail price of salt is 11 seers per rupee.



GRAM, CHANA, CHHONA, KADALAY OR SUNAGA. ( <i>Cicer arietinum</i> .)			INDIAN-CORN OR MAIZE. ( <i>Zoamys</i> .)			ARHAR OR THUR, CADJAN PEA. ( <i>Oajanus indicus</i> .)		
Present return.	Next preceding re- turn.	Corresponding re- turn of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.
...	...	...	...	...	...	...	...	...
12 8	12 8	10 0	...	...	...	...	...	...
12 8	12 8	10 0	...	...	...	10 0	10 0	...
26 0	20 0	21 0	45 0	45 0	22 0	18 0	18 0	...
27 0	27 8	19 4	...	...	20 0	15 0	15 0	18 8
28 0	26 0	20 8	...	...	...	26 0	26 0	...
	27 0	21 0						
25 0	25 8	19 8	27 0	27 0	21 0	15 0	17 0	...
22 0	22 8	18 0	22 0	22 0	20 0	14 0	14 0	...
22 8	22 0	20 0	24 8	22 8	20 0	14 0	14 0	...
20 8	20 8	16 0	...	20 0	20 0	14 8	14 0	...
25 8	28 0	21 0	28 0	...	...	12 8	13 0	...
26 8	26 8	19 0	...	...	28 0	12 10	12 0	...
26 0	26 0	...	...	...	...	11 0	11 0	...
26 0	25 0	20 0	...	...	...	12 8	12 0	...
20 0	22 0	14 8	22 0	24 0	21 0	22 0	22 0	22 8
Biri or kalai.			...	...	...	22 5	22 5	15 12
18 6	19 1	13 13						
Chhola.			...	...	...	10 8	10 8	10 0
16 0	16 0	11 0						
Biri or kalai.			...	...	...	11 0	11 0	...
16 0	16 0	12 0						
15 12	15 12	12 1	...	...	...	...	...	...
20 8	20 12	15 8	23 0	22 8	12 12	12 0	...	...
16 0	16 0	13 0	18 0	22 0	14 0	9 0 to 10 0	12 0	9 0
17 0	17 0							
20 4	20 4	21 15	22 8	22 8	16 14	15 8	...	...
18 8	19 0	16 0	...	...	...	13 0	14 0	...
14 0	14 0	9 6	...	...	...	12 0	12 0	10 0



## Station Basars of the Districts of Bengal on the 30th Ju 1899—(concluded).

WHOLESALE PRICES PER MAUND OF 40 SEERS.						AVERAGE WAGEER MONTH.												DISTRICTS.	Number.
SALT.			SALT.			UNSKILLED LABOUR— ABLE-BODIED AGRICULTURAL LABOURER.			STEEL OR DRESS- MEN.			SKILLED LABOUR— COMMON MASON, CARPENTER OR BLACKSMITH.							
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.					
B. C.	S. Ch.	S. Ch.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	BENGAL—concluded.				
U	10 0	10 0	8 0	3 11 0	3 11 0	4 7 1	8 0	10 0	10 0	8 0	8 0	8 0	15 0	15 0	15 0	Tippera.	21		
V	9 0	9 0	8 0	14 0 0	4 0 0	5 0 0	7 8	7 8	5 8	7 0	7 0	5 0	10 0	10 0	15 0	Noakbali.	25		
W	10 8	10 8	10 0	3 8 0	3 8 0	3 10 0	9 0	9 0	10 0	8 0	8 0	8 0	10 0	10 0	10 0	Chittagong.	26		
X	11 0	11 0	11 0	3 7 6	3 8 0	3 8 0	4 0	4 0	4 0	4 8	4 8	4 8	7 0	6 0	7 0	BIHAR.			
Y	10 0	10 0	10 0	3 14 0	3 14 0	4 0 0	5 0	5 0	5 0	3 8	3 8	3 8	6 0	6 0	6 0	Patna.	27		
Z	10 8	10 8	10 8	3 13 0	3 13 0	...	3 12	3 12	3 12	5 8	5 8	4 0	5 8	5 8	5 8	Gaya.	28		
a	11 0	10 14	10 0	3 10 0	3 10 0	4 0 0	3 12	3 12	3 12	4 0	4 0	4 0	7 8	7 8	7 8	Shahabad.	29		
b	10 8	10 8	10 0	3 13 0	3 13 0	4 0 0	4 0	4 0	4 0	4 8	4 8	4 8	10 0	10 0	10 0	Saran.	30		
c	11 4	11 4	10 0	3 8 9	3 8 9	4 0 0	3 0	3 0	3 0	4 0	4 0	4 0	8 0	8 0	8 0	Champaran.	31		
d	10 8	10 8	10 0	3 8 0	3 8 0	4 0 0	3 12	3 12	4 0	4 0	4 0	5 0	8 12	8 12	7 8	Muzaffarpur.	32		
e	10 0	10 0	9 15	3 8 0	3 9 0	3 15 9	4 0	4 0	4 0	5 0	5 0	5 0	7 8	6 0	7 8	Darbhanga.	33		
f	10 0	10 0	10 0	3 12 0	3 12 0	3 14 0	6 0	6 8	6 0	5 0	5 0	5 0	6 0	6 0	6 0	Monghyr.	34		
g	10 8	10 8	10 8	3 12 0	3 12 0	3 13 6	4 11	4 11	5 10	4 0	4 0	4 0	12 0	12 0	12 0	Bhagalpur.	35		
h	9 8	9 8	7 8	4 0 0	4 0 0	5 0 0	7 8	7 8	7 8	6 0	6 0	6 0	15 0	15 0	15 0	Purnea (Kasba).	36		
i	10 0	9 8	9 0	3 14 0	4 0 0	4 7 0	...	6 0	7 0	...	6 0	...	10 0	10 0	10 0	Malda (English Bazar).	37		
j	10 0	10 0	9 0	3 12 0	3 12 0	4 4 0	3 12	3 12	3 12	5 0	5 0	5 0	11 4	9 6	7 8	Sonthal Pargana.	38		
k	10 12	10 12	10 12	3 0 0	3 2 0	3 2 0	5 10	5 10	5 10	5 0	5 0	5 0	7 8	7 8	7 8	ORISSA.			
l	11 8	11 8	11 0	3 7 0	3 7 0	3 10 0	5 0	5 10	5 0	4 0	4 0	4 0	9 6	9 6	9 6	Cuttack.	39		
m	11 18	11 18	12 5	3 0 0	3 2 0	4 8 0	4 8	6 0	4 8	5 8	5 0	5 8	7 8	9 0	7 8	Balasore.	40		
n	9 0	9 0	8 0	4 7 0	4 4 0	4 5 0	4 0	4 0	4 0	5 0	5 0	5 0	6 8	6 8	6 8	Puri.	41		
o	9 0	8 8	9 0	4 6 0	4 8 0	4 8 0	4 0	3 0	4 0	5 0	5 0	5 0	8 0	8 0	8 0	CHOTA NAGPUR.			
p	8 5	8 7	7 14	...	...	...	6-1-6	6-1-6	6-1-6	4 0	4 0	4 0	7 8	7 8	7 8	Hasaribagh.	42		
q	10 8	10 8	10 0	3 10 0	3 12 0	3 14 0	4 11	4 11	4 11	6 0	6 0	6 0	11 4	11 4	11 4	Ranchi.	43		
r	7 0	7 0	7 0	4 4 0	4 4 0	4 4 0	4 0	4 0	4 0	7 0	7 0	7 0	12 0	12 0	12 0	Palamanu.	44		
s																Manbhum.	45		
t																Singbhum.	46		

- a. In the subdivisions the retail prices of salt per rupee are :—Bogusarai 10½ seers ; Jamui 10 seers.  
 f. In the subdivisions the retail prices of salt per rupee are :—Banka 10 seers ; Madhipura 9½ seers ; Supaul 10 seers.  
 g. In the Kishanganj and Araria subdivisions the retail price of salt is 9 seers per rupee.  
 h. At Balia Nawabganj the retail price of salt (karkatch) is 10 seers and panga 10 seers per rupee.  
 i. In the subdivisions the retail prices of salt per rupee are :—Deoghur 10½ seers ; Godda 9 seers ; Jamtara 11 seers ; Pakour 10 seers.  
 j. In the subdivisions the retail prices of salt (panga) per rupee are :—Jajpur 8 seers ; Kondrapara 9 seers.  
 k. At Bhadrak the retail price of salt is 10 seers per rupee.  
 l. At Khurda the retail price of salt is 11 seers per rupee.  
 m. At Gobindpur the retail price of salt is 10 seers 10 chittacks per rupee.

Published for general information.

F. A. SLACK,  
Offg. Secretary to the Govt. of Bengal.

## PRES-CURRENT (wholesale) of Food-grains, Firewood, &amp;c.,

Number.	MARKS.												
		RICE (BEST SORT).			COMMON (meta chaul).			WHEAT ( <i>Triticum sativum</i> ).			BARLEY ( <i>Hordeum vulgare</i> ).		
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1	Calcutta	4 12 0	4 12 0	5 4 0	3 0 0	3 0	3 8 0	3 12 0	2 12 0	3 8 0	2 2 0	2 2 0	2 8 0
2	Burdwan	2 12 0	2 14 0	3 12 0	2 4 0	2 0	3 5 0	2 0 0	...	3 4 0	...	...	...
3	Midnapore	3 4 0	3 4 0	3 12 0	2 6 0	2 0	3 4 0	...	...	...	...	...	...
4	Patna	5 11 3	5 11 3	6 10 0	2 6 6	2 6	3 8 0	2 2 0	2 2 0	3 2 3	...	...	...
5	Rangpur	4 0 0	4 0 0	5 12 0	2 4 0	2 0	3 10 0	2 12 0	2 12 0	4 0 0	...	...	...
6	Dacca	2 14 0	2 14 0	4 4 0	1 14 0	1 0	3 12 0	2 8 0	2 8 0	3 3 0	1 0 0	1 0 0	1 12 0
7	Chittagong	3 2 0	3 2 0	4 8 0	2 10 0	2 0	3 8 0	...	...	...	...	...	...
8	Patna	2 12 0	2 10 6	3 4 0	2 1 0	1 1 6	2 9 0	1 14 6	1 13 6	2 4 0	1 6 0	1 5 6	1 9 6
9	Munafarpur	5 0 0	5 0 0	5 11 6	2 13 9	3 6	3 1 3	2 5 6	2 5 6	2 9 3	1 10 0	1 9 0	1 11 9
10	Bhagalpur	3 3 0	3 2 9	3 7 6	2 6 9	2 9	2 13 6	2 4 0	2 4 0	2 9 6	1 6 9	1 7 0	1 9 6
11	Cuttack	3 6 3	3 6 3	3 6 6	2 2 9	2 6	2 14 6	2 6 0	2 6 0	3 13 0	...	...	...
12	Ranchi	{ 3 1 0 to 5 0 0	{ 3 1 0 to 5 0 0	{ 4 7 0 to 4 11 0	{ 2 3 6 to 2 8 0	{ 2 4 0	{ 3 10 0 to 3 12 9	{ 2 10 0 to 5 6 6	{ 2 8 0 to 6 6 6	{ 3 10 0 to 6 10 6	{ 2 3 6	{ 2 1 6	{ 2 13 6

CALCUTTA,  
The 11th July 1899.

JUAB OR CHOLUM ( <i>Sorghum vulgare</i> ).			BAJRA OR CUMBU ( <i>Pennisetum typhoides</i> ).			MARUA OR RAGI ( <i>Eleusine coracana</i> ).			GRAM, CHANA, CHOLA, KADALAY, OR SUNAGA ( <i>Cicer arietinum</i> ).		
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
15	16	17	18	19	20	21	22	23	24	25	26
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
2 0 0	2 0 0	2 4 0	2 8 0	2 6 0	2 12 0	...	...	...	2 0 0	2 0 0	2 10 0
...	...	...	...	...	...	...	...	...	1 13 0	1 14 0	2 8 0
...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	1 10 3	1 10 3	2 8 6
...	...	...	...	...	...	...	...	...	1 12 0	1 14 0	2 12 0
...	...	...	...	...	...	...	...	...	2 8 0	2 8 0	3 0 0
...	...	...	...	...	...	...	...	...	2 12 0	2 12 0	4 0 0
1 1 0	1 0 0	1 8 0	...	...	...	...	...	...	1 6 0	1 6 6	1 12 6
...	...	...	...	...	...	...	...	...	1 11 9	1 11 9	...
...	...	...	...	...	...	...	...	...	1 4 0	1 8 0	2 1 6
...	...	...	...	...	...	...	...	...	Biri or kalai.		...
...	...	...	...	...	...	...	...	...	2 1 6	2 0 6	2 12 6
...	...	...	...	...	...	...	...	...	2 6 0	2 6 0	} 3 1 0
...	...	...	...	...	...	...	...	...	to 2 8 0	to 2 8 0	



PRICES PER MAUND

INDIAN-CORN OR MAIZE ( <i>Zea mays</i> ).			ARHAR DAL OR THUR— CADJAN PEA ( <i>Cajanus indicus</i> ).			LINSEED.			MUSTARD AND RAPESEED.		
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
27	28	29	30	31	32	33	34	35	36	37	38
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
...	...	2 2 0	2 12 0	2 12 0	3 4 0	4 4 0	4 0 0	3 12 0	4 0 0	3 14 0	4 0 0
...	...	...	3 0 0	3 0 0	3 6 0	...	...	...	4 0 0	3 12 0	4 0 0
...	...	...	...	...	...	3 12 0	3 12 0	3 8 0	<div>Black mustard.</div> <div>Rape seed.</div> <div> <div>4 2 0</div> <div>4 0 0</div> <div>4 8 0</div> </div>		
...	...	...	3 2 0	3 2 0	3 10 0	3 7 0	3 7 0	3 6 0	3 8 0	3 8 0	3 8 0
1 8 0	1 8 0	2 0 0	4 0 0	4 0 0	5 4 0	10 0 0	10 0 0	11 8 0	3 8 0	3 8 0	4 8 0
...	...	...	3 4 0	3 4 0	3 6 0	...	...	...	...	...	...
...	...	...	3 12 0	3 12 0	...	...	...	...	3 10 0	3 10 0	4 0 0
0 14 0	0 14 0	1 9 6	2 3 0	2 3 0	...	3 4 0	3 4 0	2 9 0	3 4 0	3 4 0	3 4 0
1 10 0	1 10 6	3 0 0	2 12 0	2 12 0	2 9 3	...	...	...	...	...	...
...	...	1 1 6	3 3 0	3 5 3	...	4 0 0	3 10 0	3 4 0	4 0 0	4 0 0	3 15 0
...	...	...	1 11 6	1 11 6	2 7 0	...	...	...	3 12 0	3 14 6	4 8 6
...	...	...	<div>4 0 0</div> <div>to</div> <div>4 7 0</div>	<div>3 5 0</div>	<div>4 7 0</div> <div>to</div> <div>5 0 0</div>	<div>3 1 0</div>	2 13 6	3 1 0	<div>3 1 0</div> <div>to</div> <div>4 11 0</div>	<div>3 10 0</div> <div>to</div> <div>4 11 0</div>	<div>3 1 0</div> <div>to</div> <div>3 8 0</div>

0 STANDARD SEERS.

TIL OR VINJILI SEED.			SUGAR (RAW).			COTTON, CLEANED.			JUTE.		
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
39	40	41	42	43	44	45	46	47	48	49	50
Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.
3 14 0	3 14 0	4 0 0	4 10 0	4 10 0	5 2 0	15 0 0	15 0 0	16 8 0	4 12 0	4 12 0	4 8 0
—	—	—	5 8 0	5 0 0	5 8 0	12 8 0	13 0 0	16 0 0	—	—	—
—	—	—	5 0 0	4 12 0 to 5 0 0	5 0 0	18 0 0	18 0 0	18 0 0	—	—	—
—	—	—	4 0 0	4 0 0	4 0 0	18 0 0	18 0 0	24 0 0	3 12 0	3 8 0	2 13 0
—	—	—	4 8 0	4 8 0	6 0 0	—	—	—	4 0 0	4 0 0	3 0 0
—	—	—	5 8 0	5 8 0	6 0 0	—	—	—	3 8 0	3 8 0	3 8 0
—	—	—	5 2 0	5 2 0	6 4 0	12 8 0	13 0 0	13 8 0	—	—	—
3 4 0	3 4 0	3 8 0	2 8 0	2 8 0	3 0 0	12 0 0	12 0 0	14 0 0	3 8 0	3 8 0	2 12 0
—	—	—	—	—	3 1 8	—	—	—	—	—	—
—	—	—	3 5 0	3 11 0	3 12 0	14 0 0	14 0 0	16 0 0	—	—	—
3 10 0	3 14 0	3 10 0	4 12 0	4 12 0	5 10 0	24 8 0	24 8 0	24 8 0	—	—	—
—	—	—	4 7 0 to 5 11 0	4 4 0 to 5 6 0	4 11 0 to 5 0 0	16 0 0	16 0 0	20 0 0	—	—	—

GHI (CLARIFIED BUTTER).						HIDE (COW).			GRASS.		
TOBACCO LEAF.											
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
51	52	53	54	55	56	57	58	59	60	61	62
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
32 0 0	32 0 0	33 0 0	6 0 0	6 0 0	6 0 0	250 0 0	250 0 0	240 0 0	0 12 3	0 13 5	0 15 1
33 8 0	32 0 0	34 0 0	...	...	...	...	...	...	...	...	...
34 0 0	34 0 0	40 0 0	6 4 0	6 8 0	5 0 0	Uncleaned hides, per piece—			}	}	}
			7 0 0	7 0 0	7 8 0	Cleansed hides, per piece—					
45 0 0	45 0 0	42 0 0	7 8 0	7 8 0	6 12 0	...	...	...	...	...	...
36 0 0	35 0 0	38 0 0	8 0 0	8 0 0	6 0 0	...	...	...	0 6 0	0 6 0	...
36 0 0	35 0 0	40 0 0	6 0 0	6 0 0	7 0 0	25 0 0	25 0 0	25 0 0	0 4 0	0 4 0	...
42 0 0	42 0 0	40 0 0	11 0 0	10 8 0	10 0 0	18 0 0	18 0 0	20 0 0	...	...	...
28 0 0	28 0 0	27 0 0	3 0 0	3 0 0	3 0 0	...	...	...	0 5 0	0 6 0	0 5 0
33 11 0	32 0 0	29 1 6	10 0 0	10 0 0	10 0 0	...	...	...	...	...	...
33 0 0	33 8 0	36 0 0	4 0 0	...	4 0 0	...	...	...	...	...	...
34 0 0	36 8 0	33 12 0	4 6 0	4 6 0	4 0 0	25 0 0	25 0 0	25 0 0	0 8 11	0 8 11	...
34 0 0	36 0 0	32 0 0	8 0 0	8 0 0	8 0 0	per maund.			}		
40 0 0	42 10 6	36 0 0	18 0 0	18 0 0	18 0 0	1 0 0	1 0 0	1 4 0	0 4 0	0 4 0	0 4 0

in the undermentioned Marts of Bengal on the 30th June 1899.

STRAW.			JUAR STALKS.			PRICES PER MAUND OF 40 STANDARD SFEES.									MARTS.
						IRON.			FIREWOOD.			SALT.			
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	
63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78
Rs. A. P.	Rs. A. P.	Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
0 9 0	0 10 0	0 12 0	...	...	...	5 4 0	5 4 0	5 8 0	0 7 0	0 7 0	0 7 0	3 6 0	3 6 0	3 7 0	1. Calcutta.
0 3 6	0 3 6	0 8 0	...	...	...	...	...	...	0 8 0	0 8 0	0 8 0	3 3 6	3 4 0	3 10 0	2. Burdwan.
0 4 0	0 4 0	...	...	...	...	{ 4 0 0 to 4 8 0	{ 4 4 0 to 4 8 0	{ 4 8 0 to 4 12 0	0 6 0	0 6 0	0 4 0	3 9 0	3 8 0	4 6 0	3. Midnapore.
0 12 0	0 12 0	1 0 0	...	...	...	7 8 0	7 8 0	7 8 0	0 4 0	0 4 0	0 4 0	3 14 0	3 14 0	3 14 0	4. Pabna.
0 8 0	0 8 0	...	...	...	...	6 0 0	6 0 0	6 8 0	0 5 0	0 5 3	0 5 4	4 0 0	4 0 0	4 0 0	5. Rangpur.
...	...	...	...	...	...	5 0 0	5 0 0	5 0 0	0 5 0	0 5 0	0 5 0	3 9 0	3 9 0	4 0 0	6. Dacca.
...	...	...	...	...	...	5 0 0	5 0 0	5 0 0	...	...	...	3 8 0	3 8 0	3 10 0	7. Chittageng.
...	0 6 0	0 6 0	...	...	...	3 0 0	3 0 0	3 0 0	0 6 6	0 6 0	0 5 0	3 7 6	3 8 3	3 8 0	8. Patna.
...	...	...	...	...	...	6 10 6	6 10 6	8 0 0	0 4 6	0 4 6	0 4 0	3 7 6	3 7 6	4 0 0	9. Munaffarpur.
...	...	...	...	...	...	5 4 0	5 0 0	5 8 0	0 5 9	0 5 9	0 6 6	3 12 0	3 12 0	3 14 0	10. Bhagalpur.
0 8 0	0 8 0	...	...	...	...	4 8 0	4 8 0	4 8 0	0 4 0	0 4 0	0 5 0	3 0 0	3 0 0	3 2 0	11. Cuttack.
No fixed rate.			...	...	...	5 0 0	5 0 0	5 11 0	0 4 0	0 4 0	0 4 0	4 6 0	4 8 0	4 8 0	12. Ranchi.

F. A. SLACK,  
Offg. Secretary to the Govt. of Bengal.

## Meteorological Report of the Province of

METEOROLOGICAL DIVISION.	DIVISION.	DISTRICT.	Representative stations.	STATION OBSERVATIONS.												
				AIR PRESSURE.					WIND.		TEMPERATURE.					
				Highest, 8 A.M., barometer reading.	Lowest 8 A.M., barometer reading.	Mean, 8 A.M., reduced to 32°.	Mean reduced to sea-level and constant gravity, Lat. 45°.	Variation from normal mean.	Mean direction at 8 A.M.	Mean velocity in miles daily.	Highest of month.	Lowest of month.	Mean daily maximum temperature.	Mean daily minimum temperature.	Mean daily temperature.	Variation from normal mean.
SOUTH-WEST BENGAL.	Burdwan ...	Burdwan ...	Burdwan ...	29.610	29.440	29.523	29.508	+0.028	S10°W	102	100.0	74.3	92.5	78.9	85.7	-1.1
		Birbhum ...	Raniganj ...	29.372	29.311	29.272	29.552	0	S11°E	54	107.8	73.9	95.0	78.9	86.9	-0.6
		Bankura ...	Bankura ...	29.390	29.237	29.298	29.535	-	S13°E	35	107.1	74.6	94.2	78.5	86.4	-0.9
		Midnapore ...	Midnapore ...	29.589	29.406	29.479	29.574	+0.031	S4°E	134	102.3	73.1	92.9	78.0	85.4	-1.6
		Howrah ...														
	Presidency ...	24-Parganas ...	Saugor Island ...	29.680	29.510	29.613	29.582	+0.031	S15°W	439	91.9	75.1	88.6	81.0	84.8	-1.3
		Calcutta ...	Calcutta ...	29.703	29.538	29.617	29.584	+0.033	S0°W	140	97.4	73.2	90.8	78.4	84.6	-0.5
		Nadia ...	Krishnagar ...	29.680	29.513	29.584	29.578	-	S15°E	153	96.2	74.2	90.6	78.8	84.4	-1.5
		Murshidabad ...	Berhampore ...	29.661	29.488	29.553	29.567	+0.012	S17°E	129	102.2	75.3	91.5	78.3	84.9	-0.7
		Jessore ...	Jessore ...	29.710	29.527	29.607	29.587	+0.016	S7°E	72	96.0	72.7	90.1	78.6	84.3	-1.0
NORTH BENGAL.	Rajshahi ...	Rajshahi ...	Rampur Boalia ...	29.658	29.484	29.554	29.573	+0.020	S20°E	170	97.6	72.1	89.7	78.0	83.9	-0.8
		Dinajpur ...	Dinajpur ...	29.603	29.443	29.518	29.585	+0.018	S73°E	72	95.3	70.2	88.3	76.8	82.6	-0.6
		Jaipalguri ...	Jaipalguri ...	29.464	29.281	29.370	29.613	+0.007	S65°E	81	90.4	72.1	85.8	75.6	82.7	-0.5
		Darjeeling ...	Darjeeling ...	28.967	28.843	28.906	-	+0.012	S46°W	120	99.7	53.0	85.2	56.5	60.8	+0.6
		Cooch Behar ...		29.601	29.431	29.503	29.615	-	S72°E	66	90.4	71.1	85.8	76.3	81.0	-
	Dacca ...	Rangpur ...	Rangpur ...	29.608	29.442	29.526	29.601	+0.006	S72°E	78	93.2	71.1	87.8	76.8	82.1	+0.3
		Hogra ...	Hogra ...	29.632	29.493	29.570	29.593	-	?	?	94.7	70.2	80.3	77.6	83.4	+0.3
		Patna ...	Sirajganj ...	29.677	29.492	29.588	29.587	+0.006	S29°E	81	97.8	70.2	88.3	77.1	82.7	-0.3
		Dacca ...	Narayanjanj ...	29.742	29.546	29.634	29.609	+0.015	S30°E	223	93.6	70.7	87.9	77.7	82.8	-0.9
		Mymensingh ...	Mymensingh ...	29.689	29.516	29.601	29.614	+0.011	S47°E	32	92.2	70.6	85.9	76.72	81.42	-0.6
EAST BENGAL.	Chittagong ...	Faridpur ...	Faridpur ...	29.716	29.534	29.615	29.609	+0.013	S19°E	46	93.8	69.9	88.4	77.1	82.8	-0.5
		Backergunge ...	Barisal ...	29.747	29.553	29.632	29.610	+0.026	S27°E	102	96.8	70.1	87.9	77.0	82.9	-0.5
		Tippere ...	Comilla ...	29.733	29.561	29.642	29.626	-	S17°E	187	93.3	70.8	87.4	76.7	82.0	-0.4
		Noakhali ...	Noakhali ...	29.765	29.581	29.639	29.629	-	S43°E	170	91.7	68.3	85.5	75.6	80.6	-1.4
		Chittagong Hill Tracts ...	Chittagong ...	29.730	29.505	29.605	29.640	+0.007	S49°E	227	89.2	70.0	84.8	76.2	80.0	-0.8
	Patna ...	Patna ...	Bankipore ...	29.489	29.339	29.403	29.538	-0.001	S36°E	176	107.5	75.2	90.6	78.9	87.0	-1.4
		Gaya ...	Gaya ...	29.265	29.155	29.202	29.523	+0.001	S36°E	150	113.0	73.8	99.7	73.9	89.8	+0.1
		Shahabad ...	Dehri ...	29.252	29.159	29.212	29.512	-0.004	S20°E	150	114.5	73.0	100.1	80.8	90.5	+0.1
		Shahabad ...	Buxar ...	29.419	29.263	29.323	29.515	-0.002	S72°E	127	110.0	73.6	96.8	79.7	89.3	-0.4
		Arrah ...	Arrah ...	29.468	29.331	29.379	29.518	-	S48°E	57	109.4	74.6	97.3	79.3	88.3	-0.4
BIHAR.	Bhagalpur ...	Saran ...	Chapra ...	29.482	29.336	29.400	29.533	-	S79°E	105	108.7	75.6	95.6	79.5	87.5	-0.2
		Champaran ...	Motihari ...	29.484	29.304	29.378	29.559	-	N36°E	105	102.0	70.8	92.4	77.8	85.2	-0.4
		Munafarpur ...	Munafarpur ...	29.485	29.326	29.397	29.527	-	S77°E	111	99.2	75.2	92.2	78.6	85.4	-
		Darbhanga ...	Darbhanga ...	29.533	29.361	29.433	29.562	0	S75°E	105	99.3	74.5	91.5	79.3	85.4	-0.3
		Bhagalpur ...	Bhagalpur ...	29.525	29.368	29.433	29.544	-	S62°E	?	103.3	75.6	93.2	79.0	86.1	+0.6
	Orissa ...	Purnea ...	Purnea ...	29.578	29.406	29.489	29.568	+0.008	S61°E	125	96.2	72.2	89.5	77.8	83.7	-1.0
		Malda ...	Malda ...	29.638	29.467	29.540	29.563	-	S31°E	66	100.1	74.0	91.4	78.5	85.0	-1.0
		Sonthal Parganas ...	Naya Dumka ...	29.234	29.043	29.110	29.552	+0.019	S24°E	52	108.0	71.8	93.5	77.8	85.7	-0.7
		Cuttack ...	Cuttack ...	29.639	29.467	29.507	29.589	+0.035	S34°W	75	104.4	73.2	93.9	79.3	86.0	-1.5
		False Point ...	False Point ...	29.711	29.555	29.634	29.597	+0.037	S41°W	277	91.5	73.1	88.3	79.1	83.7	-1.8
CHOTA NAGPUR.	Orissa ...	Balasore ...	Balasore ...	29.656	29.498	29.590	29.582	+0.047	S38°E	145	100.0	74.3	91.2	78.2	84.7	-0.9
		Shortt's Island ...	Shortt's Island ...													
		Puri ...	Puri ...	29.706	29.541	29.630	29.601	-	S51°W	380	92.7	76.1	89.1	80.9	85.1	-
		Gopalpur ...	Gopalpur ...	29.705	29.544	29.637	29.597	-	S34°W	430	92.3	75.1	88.5	80.0	84.3	-
		Hasaribagh ...	Hasaribagh ...	27.687	27.562	27.616	29.543	+0.006	S25°W	180	108.1	70.6	93.8	76.8	85.1	+0.6
	Chota Nagpur ...	Ranchi ...	Ranchi ...	27.580	27.441	27.608	29.551	+0.018	S41°W	219	106.3	68.9	92.6	75.9	84.3	+1.0
		Daltonganj ...	Daltonganj ...	29.930	29.785	29.855	29.522	-	S11°E	132	114.6	72.5	99.7	78.7	89.2	-
		Manbhum ...														
		Singbhum ...	Chaibasa ...	28.940	28.778	28.853	29.556	-	S70°W	64	110.0	73.8	96.6	78.3	87.5	-0.8
		Sibesar ...	Sibesar ...	29.405	29.255	29.330	29.619	+0.003	N9°W	95	97.7	70.5	86.1	74.9	80.5	-3.7
ASSAM.	Chota Nagpur ...	Goalpara ...	Dhubri ...	29.628	29.469	29.539	29.609	+0.019	S70°E	80	89.2	69.7	85.8	75.4	79.5	-1.4
		Cachar ...	Silchar ...	29.731	29.525	29.610	29.607	+0.024	N45°E	89	93.5	70.8	87.7	76.8	81.8	-0.7

\* Mean of 29 days.

† Mean of 30 days.

‡ Mean of 26 days.



Bengal for the month of June 1899.

DISTRICT OBSERVATIONS.																DISTRICT.
HUMIDITY.		CLOUD.		Rain-fall.	RAINFALL—											
Mean, 8 A.M.	Variation from normal mean.	Mean cloud amount, 8 A.M.	Variation from normal mean, 8 A.M.		Of month.					Since 16th May 1899.						
					Mean of district.	Normal mean.	Variation from mean.	Number of rainy days.	Normal mean number of rainy days.	Mean of district.	Normal mean.	Variation.	Mean number of rainy days.	Normal mean number of rainy days.		
87	+7	9.0	+1.8	11.51	11.10	9.21	+1.89	13.80	11.58	14.50	12.14	+2.36	18.00	14.85	Burdwan.	
83	—	6.5	—	4.46	12.17	10.73	+1.44	14.75	12.15	14.28	13.47	+0.81	18.75	15.40		Birbhum.
83	—	6.6	—	10.46	12.93	10.44	+2.48	14.80	11.76	13.97	13.59	+0.38	10.70	16.12		Bankura.
88	—	6.2	—	12.55	14.86	9.80	+5.06	13.67	11.23	18.35	12.91	+5.44	17.50	14.75		Midnapore.
					13.48	9.70	+3.78	14.67	11.92	22.40	12.40	+9.91	21.34	16.74	Hoochly.	
					14.09	10.24	+4.45	14.80	12.43	22.33	12.96	+9.37	19.00	16.11	Howrah.	
86	—1	8.9	+1.0	9.78	14.01	10.03	+3.98	13.29	12.46	20.77	13.55	+7.22	18.86	16.50	24-Pargannas.	
87	+4	8.2	+1.5	16.94	16.94	10.74	+6.20	10.00	12.77	24.52	13.76	+10.76	19.00	16.45	Calcutta.	
87	—	7.9	—	10.81	9.77	9.72	+0.05	14.00	12.30	13.93	13.33	+2.62	20.40	17.03	Nadia.	
88	+6	9.9	+1.6	10.18	11.40	9.00	+1.89	13.63	11.87	—	12.98	—	—	16.06	Murshidabad.	
88	+1	8.1	—0.6	11.09	14.83	11.29	+2.74	14.00	12.36	20.51	14.06	+5.56	22.00	18.16	Jessore.	
					12.29	12.05	—0.36	15.33	15.08	18.80	15.91	+2.89	24.00	19.20	Khulna.	
90	—	8.9	—	12.61	12.88	9.78	+4.10	15.80	11.34	19.06	13.62	+5.43	21.20	15.94	Rajahm.	
91	—	9.8	—	16.93	18.16	12.00	+5.56	16.20	12.87	21.32	16.38	+4.94	21.80	16.75	Dinajpur.	
93	—	4.6	—	23.24	20.47	25.56	+13.91	22.75	17.30	45.67	33.43	+12.14	29.75	24.44	Jalpaiguri.	
96	+8	8.7	0	27.43	27.22	—	—	—	21.48	—	24.51	—	—	28.03	Darjeeling.	
92	—	10.0	—	42.56	40.08	20.44	+10.64	21.25	19.68	47.27	33.20	+9.07	27.80	27.08	Cooch Behar.	
92	—	8.8	—	9.86	16.24	19.51	—3.27	19.60	14.96	26.76	26.47	+0.29	28.00	21.36	Rangpur.	
89	—	8.3	—	13.74	12.65	12.43	+0.04	10.00	13.27	19.51	17.41	+2.10	22.25	18.69	Bogra.	
92	—	9.4	—	16.00	13.14	10.85	+2.29	15.60	13.50	19.36	15.33	+3.97	23.50	18.56	Pabna.	
90	+1	8.6	+0.5	16.05	15.58	12.72	+2.86	16.80	15.13	25.50	17.93	+7.57	27.20	20.60	Dacca.	
90	—	7.9	—	12.22	16.84	17.91	—1.07	18.76	18.20	31.32	24.71	+6.51	20.75	21.62	Mymensingh.	
93	—	7.7	—	17.52	16.67	12.25	+4.42	16.33	14.36	25.20	16.74	+5.46	27.33	19.34	Faridpur.	
88	—	7.4	—	16.02	13.60	16.25	—2.75	16.17	16.26	24.07	20.62	+4.05	26.00	21.14	Rackerungge.	
80	—	8.6	—	14.76	—	—	—	—	14.36	—	19.37	—	—	19.05	Tippera.	
91	—	7.8	—	14.94	22.17	21.54	+0.63	19.60	17.00	35.44	27.33	+8.11	26.00	22.34	Noakhali.	
86	0	7.1	—0.9	20.06	22.61	—	—	—	17.68	—	29.40	—	—	23.39	Chittagong.	
					16.52	17.87	—1.35	20.00	19.85	28.00	23.48	+4.52	32.00	23.77	Chittagong Hill Tracts.	
84	+11	6.6	+0.6	11.94	10.53	6.98	+3.54	12.00	7.83	11.03	8.36	+2.67	13.17	9.08	Pasua.	
78	+11	5.7	—0.7	11.54	12.40	5.60	+6.80	11.77	7.17	—	6.63	—	—	6.32	Gaya.	
83	—	4.4	—	11.13	—	—	—	—	—	—	—	—	—	—	Shahabad.	
79	—	6.0	—	11.17	—	—	—	—	7.25	—	6.94	—	—	6.31		
83	—	6.4	—	8.03	—	—	—	—	—	—	—	—	—	—		
83	—	7.8	—	7.79	6.99	6.94	+0.05	11.33	8.05	8.77	7.94	+0.83	14.33	9.60		
90	—	3.8	—	8.77	12.30	10.15	+2.24	14.00	9.80	14.06	11.80	+2.86	16.75	12.23	Saran.	
83	—	4.5	—	20.70	9.14	7.40	+1.74	10.50	7.89	—	8.67	—	—	9.92	Champanan.	
87	+6	6.5	+1.1	9.63	9.28	7.41	+1.87	10.30	8.33	10.14	8.37	+1.87	12.00	10.22	Muzaffarpur.	
					9.22	6.91	+2.41	11.00	7.06	9.61	8.68	+0.93	11.80	9.15	Darbhanga.	
86	—	7.7	—	8.08	9.77	8.51	+1.26	13.50	9.48	11.46	10.62	+0.84	16.33	12.06	Monghyr.	
90	+4	9.8	+3.2	13.99	17.46	13.08	+4.38	17.25	12.30	21.95	16.84	+5.11	21.85	16.00	Shahgalpur.	
89	—	8.8	—	17.51	14.36	9.73	+4.63	16.00	11.45	17.65	12.86	+4.79	19.75	14.02	Purnea.	
81	—	8.5	—	16.79	—	—	—	—	11.18	—	11.10	—	—	14.01	Sonthal Parga.	
83	—	8.3	+1.9	11.44	—	—	—	—	10.28	—	13.24	—	—	13.14	ana.	
87	+3	8.6	+1.4	9.18	—	—	—	—	—	—	—	—	—	—	Outback.	
85	—	6.1	—	14.24	11.39	8.97	+2.42	16.14	10.73	11.88	12.27	+2.81	10.00	14.28	Balasore.	
					3.44	4.36	8.36	—4.10	9.60	9.34	6.19	10.38	—4.63	11.60	11.48	Shah's Island.
85	—	3.8	—	5.23	—	—	—	—	—	—	—	—	—	—	Puri.	
70	+2	6.0	+1.6	14.84	11.34	7.58	+3.76	14.40	9.76	—	9.22	—	—	11.74	Hazaribagh.	
73	—	6.8	—	11.61	11.62	8.11	+3.71	13.00	10.86	13.63	9.71	+3.92	15.67	12.66	Ranchi.	
61	—	5.0	—	9.24	14.08	6.44	+7.64	12.00	7.77	14.39	7.40	+6.99	12.73	9.13	Palamau.	
					11.98	8.93	+3.05	12.67	10.84	13.63	11.07	+2.76	16.17	13.49	Manbham.	
80	—	4.0	—	7.51	11.17	9.18	+1.99	13.25	11.31	13.14	11.79	+1.35	16.73	14.75	Singbham.	
94	+5	9.8	+1.1	12.03	—	—	—	—	—	—	—	—	—	—	Simser.	
92	+3	9.1	+1.7	22.88	—	—	—	—	—	—	—	—	—	—	Dhubri.	
92	+11	9.5	+1.2	33.48	—	—	—	—	—	—	—	—	—	—	Cachar.	

Table of Rainfall recorded at stations

Meteorological Division.	District.	Station.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Burdwan.	Burdwan	Kalna	...	...	...	...	...	0.57	...	...	...	0.23	0.06	...	0.28	0.08	0.41	2.08	1.39	2.33	...	...	
	Burdwan	Burdwan	...	...	...	...	...	0.11	0.21	...	...	...	1.04	...	0.09	0.10	0.06	0.55	0.78	1.20	...	0.05	
	Burdwan	Katwa	...	...	...	...	...	...	...	...	...	...	1.14	...	0.40	0.07	0.27	0.06	0.36	0.10	0.03	0.04	
	Burdwan	Raniganj	...	...	...	...	...	...	...	...	...	0.01	...	...	0.11	0.06	...	0.18	0.15	0.20	...	...	
	Burdwan	Mankur	...	...	...	...	...	...	...	...	...	...	2.83	...	...	1.95	1.15	0.15	0.86	0.09	0.29	1.74	
	Birbhum	Suri	0.23	...	...	...	...	0.57	...	...	...	...	0.85	...	2.59	0.70	0.60	...	4.17	0.71	...	0.20	
	Birbhum	Hotampur	...	...	...	...	...	...	0.04	...	...	...	...	...	1.00	0.14	2.15	0.67	1.72	0.13	0.05	0.11	
	Birbhum	Rampur Hat	...	...	...	...	...	0.77	...	...	...	...	0.70	0.77	1.01	2.00	0.89	0.83	0.55	0.17	...	0.04	
	Birbhum	Bolpur	...	...	...	...	...	...	1.04	...	...	...	...	1.07	...	0.30	0.30	1.53	0.05	1.01	0.18	...	0.03
	Birbhum	Murari	...	...	...	1.80	...	...	...	...	...	...	0.07	0.78	0.91	0.46	1.03	0.78	1.43	1.89	...	0.09	
Bansura.	Bansura	Labpur	...	...	...	...	...	0.87	0.24	...	...	...	0.91	...	0.21	0.61	1.36	0.31	1.40	...	...	1.23	
	Bansura	Bansura	...	...	...	...	...	...	...	...	...	0.01	0.23	...	0.02	0.21	...	0.12	1.70	2.46	0.03	0.30	
	Bansura	Vidhupur	0.23	...	...	...	...	...	0.34	...	...	...	1.31	0.67	...	1.30	...	2.09	0.24	1.00	0.08	...	
	Bansura	Malihara	...	...	...	...	...	...	...	...	...	0.50	...	0.11	0.36	0.02	1.60	0.75	0.36	0.17	...		
	Bansura	Khatra	...	...	...	...	...	0.22	...	...	...	...	0.80	...	...	0.15	...	3.00	1.20	3.00	...	0.33	
	Bansura	Indus	0.57	...	...	...	...	...	...	...	...	...	0.29	0.80	...	1.04	0.17	0.64	1.53	1.87	0.46	...	
	Bansura	Kotalpur	0.26	...	...	...	...	...	...	...	...	...	1.00	...	...	...	0.15	0.05	1.06	1.75	...	0.28	
	Bansura	Onda	...	...	...	...	...	0.45	...	...	...	...	1.42	...	...	...	3.05	...	1.48	0.55	0.41	1.65	
	Bansura	Gangajalhati	0.16	...	...	...	...	...	0.41	...	...	...	...	...	...	...	3.34	...	1.53	0.45	0.42	...	
	Bansura	Barpur	0.00	...	...	...	...	...	0.34	0.50	...	...	...	2.25	0.13	0.62	...	0.42	0.43	1.42	0.13	...	
Midnapore.	Midnapore	Sonamukhi	...	...	...	...	...	...	0.25	...	...	...	0.49	...	...	0.20	...	0.53	0.43	0.50	...	...	
	Midnapore	Gontai	0.03	...	...	...	...	...	...	...	...	...	2.74	...	...	2.70	...	0.45	1.50	0.20	0.03	...	
	Midnapore	Tamluk	...	...	...	...	...	...	0.09	...	...	...	2.76	...	...	0.86	0.08	0.08	0.72	1.44	0.42	...	
	Midnapore	Midnapore	0.28	...	...	...	...	...	0.39	0.41	...	...	0.32	...	0.33	0.34	0.03	0.34	1.15	2.84	0.44	...	
	Midnapore	Ghatol	0.39	...	...	...	...	...	0.05	...	...	...	2.12	...	0.34	0.05	...	2.57	0.41	2.10	0.16	...	
	Midnapore	Kukrahaty	...	...	...	...	...	...	0.04	...	...	...	0.87	...	0.10	1.20	...	0.07	1.13	1.78	0.40	...	
	Midnapore	Garbata	0.30	...	...	...	...	...	...	...	...	...	3.04	...	...	1.83	...	0.33	0.63	2.37	0.06	...	
	Midnapore	Panskura	0.10	...	...	...	...	...	...	...	...	...	2.29	...	1.21	0.11	...	0.25	1.50	2.05	...	...	
	Midnapore	Dantan	...	...	...	...	...	...	0.15	...	...	...	0.10	...	...	...	...	1.70	1.53	0.46	0.91	...	
	Midnapore	Serampore	...	...	...	...	...	...	0.04	...	...	...	0.07	0.09	...	0.18	1.78	0.34	0.23	2.25	...	...	
Hooghly.	Hooghly	Hooghly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Hooghly	Jahannabad	0.20	...	...	...	...	...	0.48	...	...	...	0.07	0.09	...	0.48	0.36	0.03	2.68	1.61	0.71	0.30	
	Hooghly	Howrah	...	...	...	...	...	0.18	...	...	...	...	0.37	...	0.20	0.05	...	0.45	2.07	2.11	0.56	...	
	Hooghly	Moheswara	...	...	...	...	...	...	...	...	...	...	1.12	0.30	0.05	0.07	0.02	0.25	1.15	3.47	0.00	...	
	Hooghly	Uluberia	...	...	...	...	...	0.15	...	...	...	...	0.73	...	0.22	0.80	0.28	...	1.45	2.31	0.40	...	
	24-Parganas	Saugor Island	0.03	...	...	...	...	0.03	0.04	...	...	...	2.45	...	...	0.12	...	0.10	1.67	0.90	0.03	0.09	
	24-Parganas	Diamond Harbour.	...	...	...	...	...	0.09	...	...	...	...	0.08	...	0.34	2.50	...	0.08	0.43	0.87	0.03	...	
	24-Parganas	Canning Town	...	...	...	...	...	...	...	...	...	...	...	...	0.27	3.04	1.05	1.42	0.40	1.80	0.92	0.50	
	24-Parganas	Alipore (Obay.)	...	...	...	...	...	0.12	...	...	...	...	...	0.25	0.02	0.35	0.40	0.24	0.10	1.77	2.03	0.43	0.01
	24-Parganas	Barraekpore...	...	...	...	...	...	...	...	...	...	...	...	...	0.54	0.50	0.61	0.20	2.43	2.10	0.16	0.03	
Nadia.	Nadia	Dum-Dum	...	...	...	...	...	0.06	...	...	...	...	0.15	...	0.49	3.24	0.08	0.65	2.04	2.45	0.84	...	
	Nadia	Barasat	...	...	...	...	...	0.45	...	...	...	...	0.35	...	0.63	0.35	1.14	0.40	4.25	2.38	0.47	...	
	Nadia	Ranighat	...	...	...	...	...	0.33	...	...	...	...	0.49	0.13	0.02	1.12	0.26	1.50	1.05	...	...		
	Nadia	Ranighat	...	...	...	...	...	0.18	...	...	...	...	0.00	0.02	0.06	0.72	0.12	1.15	1.45	1.23	0.05	...	
	Nadia	Krishnagar	...	...	...	...	...	...	...	...	...	...	0.04	...	0.73	0.40	0.40	1.73	0.61	0.47	0.09	0.35	
	Nadia	Chudanga	...	...	...	...	...	...	...	...	...	...	0.02	0.25	1.84	0.13	0.30	1.55	1.36	0.74	0.20	0.05	
	Nadia	Meherpur	...	...	...	...	...	...	...	...	...	...	0.08	0.04	...	0.02	0.22	0.73	0.81	0.06	0.41	0.10	
	Nadia	Kushia	...	...	...	...	...	...	...	...	...	...	0.22	...	1.17	...	0.20	0.70	0.31	0.55	...	0.07	
	Nadia	Kandi	...	...	...	...	...	1.84	...	...	...	...	2.15	...	1.15	0.39	...	1.55	1.39	0.19	...	1.00	
	Nadia	Berhampore...	...	...	...	...	...	0.02	...	...	...	...	0.04	0.44	0.75	0.17	0.02	0.35	1.09	0.09	...	0.08	
Murshidabad.	Murshidabad	Lalbagh	...	...	...	0.05	...	0.06	0.09	...	...	...	...	0.71	0.75	0.14	0.23	1.05	0.92	...	...	0.48	
	Murshidabad	Asimganj	...	...	...	0.06	...	0.06	...	...	...	...	...	0.61	0.74	0.04	0.17	0.96	0.80	...	...	0.30	
	Murshidabad	Jangipur	...	...	...	1.37	...	0.27	...	...	...	...	0.25	0.91	0.48	0.10	0.07	1.05	1.78	1.10	0.22	1.41	
	Murshidabad	Lakola	...	...	...	2.00	...	...	...	...	...	...	...	0.20	2.00	1.00	1.00	4.00	1.00	...	0.10	...	
	Murshidabad	Akriganj	...	...	...	0.48	...	...	...	...	...	...	...	0.40	0.13	...	0.75	1.10	0.60	0.08	0.63	...	
	Murshidabad	Patkabari	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Murshidabad	Dumkal	...	...	...	0.68	...	...	...	...	...	...	...	...	0.30	0.13	...	1.60	0.40	0.30	0.40	...	
	Murshidabad	Narail	...	...	...	...	...	...	...	...	...	...	4.00	...	0.08	0.43	...	0.19	1.59	0.06	0.71	...	
	Murshidabad	Jessore	...	...	...	...	...	...	...	...	...	...	0.06	...	0.40	0.14	0.19	1.19	0.98	1.31	0.20	...	
	Murshidabad	Jhenidah	...	...	...	...	...	...	...	...	...	...	0.60	...	0.00	0.00	0.32	1.04	0.50	0.08	0.27	0.16	
Khulna.	Khulna	Makura	...	...	...	...	...	...	...	...	...	...	1.77	...	...	2.73	...	0.77	1.00	0.31	0.75	0.21	
	Khulna	Haugan	...	...	...	...	...	...	...	...	...	...	...	...	...	0.39	1.40	1.50	3.64	2.50	0.90	0.44	
	Khulna	Sathira	...	...	...	...	...	...	...	...	...	...	...	...	0.03	0.04	0.73	1.43	0.20	0.36	0.04	0.07	
	Khulna	Bagerhat	...	...	...	...	...	...	...	...	...	...	0.03	2.47	...	0.45	0.73	1.43	0.20	0.36	0.04	0.07	
	Khulna	Khulna	0.53	...	...	...	...	...	...	...	...	...	2.04	0.53	0.95	0.25	0.74	1.50	0.44	0.27	1.19	0.09	
	Khulna	Kaliganj	...	...	...	...	...	...	...	...	...	...	0.70	0.40	...	2.55	1.00	1.20	0.76	0.81	...	0.33	

in Bengal in June 1899

21	22	23	24	25	26	27	28	29	30	Number of rainy days.	Average number of rainy days.	Total rainfall for the month.	Average rainfall for the month.	Heaviest rainfall during the month.	Total rainfall from 10th May to 30th June 1899.	Average rainfall from 10th May to 30th June 1899.	Station.	District.	Division.	Metereological Division.
0.27	0.04	0.08	0.07	0.87	0.89	0.87	1.08	1.38	0.01	14	10.53	14.53	0.10	2.37	20.30	11.89	Kalna	Burdwan.	Burdwan.	South West Bengal.
1.51	0.28	0.03	0.03	0.30	0.61	0.66	0.12	0.72	0.33	17	12.38	11.51	0.02	1.04	13.44	11.38	Burdwan	Burdwan.	Burdwan.	South West Bengal.
0.09	...	0.03	0.03	0.45	0.60	0.10	0.47	1.18	0.01	12	11.24	10.85	0.80	2.60	13.50	12.07	Katwa.	Burdwan.	Burdwan.	South West Bengal.
0.18	...	...	...	0.16	0.64	0.16	0.30	1.06	0.36	12	11.65	14.46	0.27	1.06	7.08	11.58	Raniganj.	Burdwan.	Burdwan.	South West Bengal.
0.23	0.03	0.18	2.53	0.17	1.20	0.60	0.75	0.47	...	12	12.10	14.15	8.85	2.85	17.88	12.24	Mankur.	Burdwan.	Burdwan.	South West Bengal.
0.31	0.01	...	0.64	0.91	0.51	0.45	1.88	0.56	...	13	13.00	16.19	11.32	4.17	17.02	13.73	Suri	Burdwan.	Burdwan.	South West Bengal.
0.05	...	...	0.38	0.45	0.85	1.28	0.06	0.73	0.10	13	12.50	10.15	11.00	2.15	12.98	13.49	Hetampur.	Burdwan.	Burdwan.	South West Bengal.
0.41	...	0.16	0.27	0.10	0.80	0.27	1.45	1.68	0.11	14	11.91	11.37	0.99	2.00	13.18	12.38	Rampur Hat.	Burdwan.	Burdwan.	South West Bengal.
0.18	0.31	...	0.31	0.98	0.99	0.66	3.10	1.43	0.53	18	?	14.43	?	2.03	13.57	14.35	Bolpur	Burdwan.	Burdwan.	South West Bengal.
0.04	0.42	0.03	0.19	0.20	0.18	0.13	0.99	1.20	0.11	14	12.08	10.46	0.90	2.46	12.64	12.63	Harari.	Burdwan.	Burdwan.	South West Bengal.
3.05	0.05	0.15	1.49	1.24	0.06	0.75	0.15	0.60	0.11	16	12.38	15.46	10.59	3.08	10.8	14.09	Bankura	Burdwan.	Burdwan.	South West Bengal.
0.33	0.10	...	0.48	0.92	...	0.28	0.67	0.97	0.17	14	12.38	0.89	10.39	1.60	7.92	12.84	Midiara	Burdwan.	Burdwan.	South West Bengal.
1.27	0.02	0.04	2.42	0.45	0.18	0.26	1.05	0.68	0.06	16	12.00	10.78	11.72	3.09	17.26	14.58	Khatra	Burdwan.	Burdwan.	South West Bengal.
...	0.15	...	0.15	2.05	0.66	0.06	0.95	1.05	0.38	13	10.91	14.07	0.38	3.42	14.25	13.86	Kotalpur.	Burdwan.	Burdwan.	South West Bengal.
0.43	1.15	0.40	1.20	0.30	0.70	0.58	1.12	0.45	...	16	11.27	18.41	8.64	3.45	30.21	10.81	Onda.	Burdwan.	Burdwan.	South West Bengal.
0.05	0.30	0.38	0.08	1.00	...	...	0.95	1.60	0.40	16	11.99	9.90	11.57	3.34	10.80	14.77	Gangajalghat.	Burdwan.	Burdwan.	South West Bengal.
0.38	0.33	0.50	1.15	1.48	...	1.11	2.32	...	...	13	10.91	14.97	11.08	3.98	17.29	16.35	Kampur.	Burdwan.	Burdwan.	South West Bengal.
0.17	0.07	...	0.97	...	0.01	0.08	0.19	1.40	0.48	11	10.92	10.87	10.06	3.32	10.87	13.44	Sonamukhi	Burdwan.	Burdwan.	South West Bengal.
0.04	...	...	0.45	...	0.27	1.33	0.24	0.20	0.10	12	10.76	13.06	9.55	4.55	17.37	12.37	Contai	Burdwan.	Burdwan.	South West Bengal.
0.49	...	0.10	2.49	3.84	0.23	1.02	0.38	0.49	0.30	16	11.55	13.25	9.43	2.84	15.39	11.84	Tamluk.	Burdwan.	Burdwan.	South West Bengal.
0.03	...	...	0.15	0.90	0.30	0.10	1.60	0.80	0.10	10	11.75	18.70	9.93	2.67	21.12	12.88	Midnapore.	Burdwan.	Burdwan.	South West Bengal.
0.80	0.15	0.18	1.40	0.05	1.05	1.30	0.35	0.28	...	11	13.13	12.18	9.71	4.15	19.22	13.44	Ghatal.	Burdwan.	Burdwan.	South West Bengal.
1.30	0.70	...	0.45	0.86	0.10	0.23	0.02	0.47	0.28	16	10.50	14.99	10.51	3.04	18.69	14.50	Kukrabady.	Burdwan.	Burdwan.	South West Bengal.
1.48	0.05	0.11	0.58	...	1.12	0.77	1.87	0.50	0.08	13	?	7.97	?	1.70	10.38	?	Garbheta.	Burdwan.	Burdwan.	South West Bengal.
0.90	0.39	0.06	2.31	2.19	0.61	0.22	1.26	1.09	0.30	14	11.68	12.09	9.73	2.37	26.89	12.28	Panskura.	Burdwan.	Burdwan.	South West Bengal.
0.94	0.11	0.11	1.41	1.63	0.33	1.00	4.77	0.36	...	14	12.08	13.49	9.34	2.69	33.27	12.11	Dantoo.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.16	0.09	1.20	0.92	1.26	0.06	16	11.80	16.25	10.04	2.21	17.03	13.08	Serampore	Burdwan.	Burdwan.	South West Bengal.
0.04	0.08	0.05	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.06	0.15	0.23	0.30	0.75	0.49	0.13	15	12.62	17.42	10.59	4.77	23.71	13.13	Jibugilly.	Burdwan.	Burdwan.	South West Bengal.
0.15	0.05	0.03	0.0																	



### Table of Rainfall recorded at stations

[illegible]

in Bengal in May 1899—continued.

21	22	23	24	25	26	27	28	29	30	Number of rainy days.	Average number of rainy days.	Total rainfall for the month.	Average rainfall for the month.	Heaviest rainfall during the month.	Total rainfall from 16th to 31st May 1899.	Average rainfall from 16th to 31st May.	Station.	District.	Division.	Meteorological District.
0.38	...	0.03	0.16	0.29	2.16	1.87	2.20	...	0.18	17	16.04	15.10	14.03	2.29	27.41	19.80	Munshiganj ...	Dacca.	Dacca.	East Bengal.
0.25	...	0.05	0.50	1.96	2.04	2.72	2.43	...	1.47	19	15.42	15.10	15.13	2.72	28.38	18.03	Dacca	Dacca		
0.21	0.08	0.02	0.07	0.21	1.43	1.71	1.88	...	1.07	13	15.08	15.72	15.09	3.02	26.45	18.83	Naryanganj.	Dacca		
0.04	...	1.45	0.41	0.83	1.21	0.95	0.78	0.65	...	13	15.30	12.40	10.31	4.00	18.16	14.55	Manikganj.	Dacca		
0.07	...	...	0.30	0.25	1.25	1.00	2.16	0.78	0.75	17	15.90	16.03	12.45	4.00	27.15	18.42	Jaydehpur.	Dacca		
0.07	...	...	0.14	0.23	0.70	0.34	0.90	...	0.40	19	16.36	17.30	18.39	3.92	34.43	24.98	Kishanganj ...	Mymensingh.		
0.07	0.15	0.55	0.33	0.37	1.80	2.17	1.33	0.32	...	17	12.44	17.43	12.37	4.00	24.72	16.93	Atia (Tangail).	Mymensingh.		
0.07	...	0.52	0.14	1.51	0.03	0.90	0.86	0.13	0.03	21	18.42	12.32	18.18	1.99	23.18	21.98	Mymensingh.	Mymensingh.		
0.30	0.05	0.07	0.20	0.20	1.20	0.55	0.65	0.25	0.35	15	14.73	10.37	15.39	2.89	20.46	20.09	Jamalpur.	Dacca.		
0.41	0.30	0.30	0.90	2.30	2.30	0.50	0.40	0.28	0.95	26	18.46	30.53	21.75	3.95	40.12	30.12	Netrokona.	Dacca.		
...	0.13	...	0.14	...	...	...	...	...	...	10?	12.90	5.46	11.87	1.45	6.70	17.45	Subarnakhal.	Dacca.		
0.20	0.20	0.20	0.20	0.60	0.60	0.70	0.70	0.90	0.90	23	15.90	20.38	28.15	3.80	43.18	37.91	Durgapur.	Dacca.		
0.05	...	...	...	0.13	0.60	0.23	0.21	0.08	0.61	13	...	10.65	...	2.85	16.97	...	Shorepur Town	Dacca.		
0.05	0.60	0.60	0.15	0.53	0.36	0.13	0.21	0.08	0.78	16	13.10	15.68	17.21	3.66	29.63	25.14	Diwanganj.	Dacca.		
0.14	...	...	0.08	0.53	0.36	0.13	0.21	0.08	0.78	20	...	10.78	...	3.40	2.78	...	Na'itabari.	Dacca.		
0.10	0.12	0.22	0.03	2.60	0.16	4.70	1.55	0.37	...	16	15.00	18.50	12.53	0.26	27.05	16.59	Madanipuri.	Faridpur.		
0.10	0.10	0.26	0.02	3.34	0.23	3.30	0.52	0.54	...	18	14.12	17.52	12.38	4.70	23.59	17.51	Faridpur.	Faridpur.		
0.08	0.24	...	1.07	1.72	0.37	1.05	1.04	1.00	0.04	15	15.74	15.13	19.87	2.30	24.60	24.60	Goalundo	Backergunge.		
0.05	0.17	0.26	0.53	0.20	0.17	1.35	1.13	0.44	0.03	18	16.40	16.50	15.93	1.58	21.57	10.81	Patuakhali ...	Backergunge.		
0.05	...	0.08	...	0.75	0.27	2.50	1.35	0.47	0.03	13	16.88	17.25	16.02	4.80	27.69	20.37	Pirojpur.	Backergunge.		
0.13	0.06	0.20	0.50	0.11	0.34	2.87	1.27	0.15	1.29	16	14.10	14.61	13.05	2.59	22.03	17.14	Gauranadi.	Barisal.		
0.07	0.05	2.00	1.13	0.78	2.36	1.61	0.16	0.17	...	16	18.05	14.04	18.20	2.36	24.97	22.25	Rhola.	Barisal.		
0.05	0.02	2.05	0.48	1.17	3.80	0.75	0.56	0.56	...	19	...	10.45	...	3.80	31.92	...	Daulatkhana.	Barisal.		
0.15	0.15	0.30	2.02	0.25	1.12	1.10	2.25	0.35	0.10	21	14.60	12.14	14.45	2.25	26.46	19.58	Bauphal.	Barisal.		
0.10	0.10	0.17	1.40	0.06	...	...	...	1.87	0.21	10	16.23	11.86	14.43	3.78	14.75	10.92	Agartala	Hill Tracts.		
0.01	0.01	0.01	0.68	1.71	1.13	0.48	1.30	0.01	0.04	14	17.30	14.76	17.95	3.18	23.37	23.30	Oomilla	Hill Tracts.		
0.12	0.08	0.20	0.34	0.44	1.27	3.05	1.19	0.07	0.11	14	17.24	14.18	16.24	3.05	22.66	20.82	Chandpur.	Hill Tracts.		
0.10	...	0.13	0.79	...	3.10	0.18	1.87	...	0.50	31	15.76	10.39	16.14	3.47	21.36	20.84	Brahmanbaria	Hill Tracts.		
0.10	0.01	0.02	0.02	2.02	0.78	0.04	0.14	0.20	0.15	20	13.10	24.09	11.31	7.50	30.11	17.88	Ramchandrapur.	Hill Tracts.		
...	0.03	0.17	1.48	0.50	0.03	0.04	0.88	...	0.05	14	13.70	...	12.11	...	17.24	...	Nasirpur.	Hill Tracts.		
0.01	0.07	0.13	0.82	0.13	0.35	2.00	0.31	0.40	0.64	19	11.10	10.80	14.34	4.05	23.40	18.50	Daudkandi.	Hill Tracts.		
0.35	...	...	0.61	1.10	1.70	0.87	2.47	...	1.41	21	17.25	20.85	24.42	6.80	40.14	30.16	Kashab.	Chittagong.		
0.43	0.03	...	1.45	2.10	4.67	2.66	3.03	1.82	0.07	22	16.30	20.35	21.53	4.87	41.21	28.17	Laksam.	Chittagong.		
...	0.09	...	4.30	1.72	0.84	0.80	2.13	0.02	0.29	16	10.10	14.55	10.00	2.13	25.22	21.36	Nonkhali ...	Chittagong.		
0.40	0.10	1.06	4.30	1.09	0.54	0.37	1.48	...	1.33	16	...	20.34	...	4.30	36.47	...	Harishpur.	Chittagong.		
0.07	...	0.40	0.40	2.05	2.80	1.45	2.05	0.23	1.75	20	...	24.43	...	2.45	40.05	...	Ranganj.	Chittagong.		
...	0.19	0.08	1.25	2.83	7.00	3.02	0.72	0.69	0.48	18	16.85	37.94	31.57	7.90	51.31	38.10	Chittagong.	Chittagong.		
...	...	...	0.940	1.05	1.35	0.18	1.35	0.16	...	18	16.02	...	22.60	...	...	...	Ux's Bazar	Chittagong.		
0.12	0.14	...	1.02	4.47	4.32	1.97	...	...	0.20	10	16.80	27.49	21.09	4.47	41.29	20.07	Chittagong.	Chittagong.		
...	...	1.41	6.99	7.38	1.82	0.88	...	...	1.30	20	17.80	20.31	10.98	7.58	33.35	30.42	Kutubdia.	Chittagong.		
0.26	...	1.64	6.12	2.05	1.25	0.07	1.60	0.50	0.55	16	17.09	22.86	17.20	0.06	34.24	24.23	Satkhya.	Chittagong.		
...	...	...	3.08	1.40	1.90	0.78	1.14	...	0.41	21	...	23.64	...	0.12	30.16	...	Kodala.	Chittagong.		
0.05	...	...	0.75	3.81	1.23	0.28	0.11	0.43	0.08	20	10.85	16.62	17.67	3.81	28.09	13.48	Penna.	Chittagong.		
0.11	0.40	...	2.00	5.05	3.22	0.98	...	1.57	0.15	22	...	22.43	...	5.06	30.13	...	Mirarai.	Chittagong.		
0.20	...	3.10	1.06	1.60	0.57	0.07	1.00	1.40	0.18	14	7.85	11.94	7.31	3.42	13.00	8.67	Ramkamati.	Chittagong.		
0.06	...	...	1.45	...	0.16	1.60	0.60	1.24	1.25	11	7.45	13.16	0.05	3.10	13.88	8.09	Bandarban	Chittagong.		
0.25	0.28	0.30	2.11	0.09	0.10	0.09	0.31	...	...	7	7.62	8.16	5.73	3.18	8.28	7.02	Patna.	Chittagong.		
0.50	0.28	0.30	1.59	2.48	...	0.54	2.70	0.32	...	13	8.36	12.10	6.77	2.70	12.27	8.46	Bihar.	Chittagong.		
...	0.24	1.35	0.83	0.81	0.70	4.45	1.01	2.08	0.22	11	8.70	8.40	8.29	2.19	14.36	6.84	Bikram.	Chittagong.		
0.09	0.08	0.37	1.37	1.82	0.54	1.82	0.95	1.07	0.14	13	8.04	11.64	0.56	1.92	11.84	7.59	Hilen.	Chittagong.		
...	...	0.08	0.68	1.00	0.06	1.09	0.82	2.15	0.50	9	7.39	10.07	0.25	2.15	11.17	7.53	Aurangabad...	Gaya.		
0.03	0.40	0.43	1.03	2.40	0.92	2.46	0.40	0.61	0.68	11	6.61	8.27	5.04	2.56	8.96	6.65	Gaya.	Gaya.		
0.55	0.04	4.97	4.94	0.03	1.95	3.40	0.5	0.60	...	15	7.00	11.06	4.89	2.46	12.37	6.02	Nawada.	Gaya.		
0.10	0.55	0.11	3.83	0.53	3.15	0.40	2.32	0.27	...	11	6.70	17.40	4.86	4.94	17.77	5.08	Juhanaabad.	Gaya.		
0.40	0.50	0.00	1.15	0.20	2.00	0.30	3.15	0.00	0.15	14	7.30	14.82	4.78	3.85	15.95	5.52	Arwal.	Gaya.		
...	0.13	0.00	0.14	1.50	0.45	0.13	1.80	1.00	0.14	11	8.80	9.27	5.95	2.00	6.78	6.51	Dandnagar.	Gaya.		
0.05	0.05	...	0.30	2.02	0.30	4.05	0.40	0.80	0.95	12	7.88	11.17	5.20	3.65	11.58	6.77	Shershah.	Gaya.		
0.25	...	...	1.43	8.03	0.33	4.00	...	...	...	13	7.92	12	5.91	...	0.63	...	Bhaur.	Gaya.		
0.10	0.49	0.07	3.14	3.37	0.13	2.53	0.50	0.65	0.40	13	6.05	12	6.10	...	5.46	...	Dehri.	Gaya.		
...	0.06	0.00	1.00	0.10	1.04	2.11	0.94	0.12	0.05	10	8.15	7.71	6.14	2.11	10.00	7.24	Bhathua.	Gaya.		
0.06	...	...	1.90	3.40	1.10	0.30	0.60	0.75	0.22	12	...	13.88	...	3.40	13.88	...	Sasaram.	Gaya.		



### Table of Rainfall recorded at stations

[illegible]



**SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS  
TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVATIONS  
TAKEN IN ASSAM, FOR THE MONTH OF JUNE 1899.**

WEATHER has been unusually settled throughout the month, especially over the Bay, where the advancing monsoon almost invariably gives rise to disturbances of more or less severity. During the past month there was not the least sign of cyclonic weather at any time, a fact which is the more remarkable, as shallow depressions such as occur during the monsoon season were not unfrequent in May. It is possible that the occurrence of these shallow depressions indicated the commencement of monsoon weather earlier than usual, a surmise which is supported by two noticeable features in the weather of May and the early part of June. The first of these was the typical monsoon weather with general cloud and heavy rainfall which obtained during a large portion of the month of May; the second that notwithstanding the low pressure in the east of the province, subsequent to the occurrence of these depressions, the wind circulation retained its usual monsoon directions over the Bay and the province.

The comparatively dry weather which prevailed over the west of the province in the early part of June was more of the nature of a break in the rains, and it came to an end in consequence of the formation of a shallow land depression about the 10th such as not unfrequently forms in July and August. Though the depression filled up soon after its first appearance, it caused the showery weather, which had been continuous in the eastern districts from the beginning, to extend westward over the whole province, and from about the 13th ordinary monsoon weather became established in the central districts, Bihar and Chota Nagpur.

The rainfall which occurred during the third week of the month was due, to a very large extent, to local thunderstorms, and these probably arose from the small variations of pressure and changing winds which in the moist and comparatively quiet condition of the atmosphere are likely to be followed by ascensional currents, formation of cumuli and heavy rainfall.

About the end of the third week pressure rose more over the province than over the Bay, and the gradient became not only less steep than was usual for the season, but less so than had been previously the case from the beginning of the month. Rainfall in consequence became lighter and more scattered, but only for a few days, as a brisk fall of pressure which began on the 23rd and continued on the 24th restored the distribution to a practically normal condition. A slight depression formed over Assam and East Bengal with almost general westerly winds. The depression was too shallow, however, to cause a regular cyclonic circulation of winds which remained so light that they were affected by the smallest changes of pressure. The changes which followed were always of small amount; but as they were of an oscillatory nature, upwards in the east, downwards in the west, or *vice versa*, on successive days, the winds were constantly changing, and heavy general rainfall was received in all parts of the province, except the south-west. The rainfall was similar in character to what had occurred earlier in the month, was due to local disturbances, irregular in its distribution, and in places much above the normal amounts.

At the beginning of the month pressure was rising in the south-east of the Bay and falling over the province, where the gradient was moderately steep. Winds were normal in direction, south-westerly over the Bay and in the south-western districts and between south and east at other inland stations. Temperature was above the normal, but not by large amounts, except at a few stations in East Bengal and in the extreme west, where mean excess was between 5° and 8°. Showers were fairly general in East and North Bengal, and a few fell in South-West Bengal. Weather such as described above continued from day to day during the first ten days of the month with daily rainfall in the eastern districts and occasional showers, as on the 6th and 7th, further west. A ridge of slightly high pressure developed over the centre of the Bay, in consequence of which the pressure distribution was more uniform than usual for the season in that area, and weather was quiet and settled. Over the province, on the other hand, the gradient remained fairly steep.

On the 10th irregular pressure changes occurred over the province. A moderate to brisk rise was reported from Bihar and East Bengal, which with a slow fall in the central districts caused the slight depression referred to above as the only one during the whole month. Readings were above the normal at all stations, but most so in East Bengal, and the centre of the low pressure area was in the west of South Bihar with a fairly regular circulation of light cyclonic winds. The heavy rainfall which had been of daily occurrence in the eastern districts for some days extended westward, and in the course of the next two or three days reached the extreme west of the province.

This advance of cloudy rainy weather is shown by the temperature changes. On the 10th the difference from the normal varied from excess of 10° in Chota Nagpur to defect of 9° in Assam; on the 11th from excess of 2° in Orissa and Chota Nagpur to defect of 8° in Assam; and on the 12th there was a moderated defect in all districts.

A brisk to rapid rise of pressure occurred on the 11th in the depression area of the 10th, and readings were then above the normal at all inland stations by considerable amounts, more so than at coast stations, but a fall began on the 12th and continued for

several days, till a uniform distribution was established over the province. The small oscillations of pressure which then followed till about the end of the third week probably caused the continued showery weather which was a feature of those days, especially in the west of the province, where cloudy rainy weather prevailed with unusually low temperature.

Rainfall became less general on the 20th owing to the comparatively high pressure which obtained over the province for a day or two, and temperature became practically normal. Pressure fell on the 22nd, and showery weather such as occurred during the third week recommenced and continued without interruption till the end of the month. As before, the pressure distribution was uniform and winds light, so that the small oscillatory changes of pressure were sufficient to cause the local variations in the winds from east to west with thunderstorms and heavy falls of rain. Temperature remained low, with the largest defect, as in the previous period of showery weather, in the west of the province.

Pressure changes were much smaller than usual during June, owing to the absence of cyclonic disturbances, and the difference from the normal was never large. It was above the normal in the early part of the month for some time, and as subsequently the changes generally consisted of small oscillations about the normal, the means for the month are generally somewhat in excess. The greatest excess is .03 inch in Orissa and part of South-West Bengal. Elsewhere the difference from the normal varies from excess of .02 inch in East Bengal to a slight defect in the west of Bihar.

Temperature was above the normal during the first ten days, the excess being large in the western districts. After the showery weather became general it fell everywhere, and while the general rainfall continued, readings, both maximum and minimum, remained in defect, the largest difference being again in the west of the province.

The large excess in Chota Nagpur and Bihar in the early part of the month was largely neutralized by the subsequent defect, so that the means for the month differ by only small amounts from the normal. The difference in maximum readings varies from excess of less than 1° in Chota Nagpur to defect of 2° in South-West Bengal and Orissa, and in minimum readings from excess of 1° in North Bengal and Bihar to defect of less than 1° in Lower Bengal and Bihar. In South-West Bengal, Orissa and Assam the mean difference from the normal was on an average for the division from 1° to 1°·6, and in North Bengal, Bihar and Chota Nagpur the difference was less than half a degree.

Rainfall was general in the east of the province during the greater part of the month, especially in the Rangpur, Cooch Behar and Jalpaiguri districts, where it was continuous and heavy. In the central districts showers were of occasional occurrence during the first ten days, but in the extreme west it was altogether absent. Between the 10th and 13th monsoon weather was established, and from the latter date rainfall was daily reported in varying quantity from a large proportion of the measuring stations.

The general weather conditions were of a somewhat exceptional nature during the latter half of the month. No cyclonic storms occurred over the north of the Bay, so that the coast districts generally show deficient rainfall. Inland the heavier falls were caused by thunderstorms or small local disturbances, and consequently the distribution is less regular than usual. The total fall for the month is below the normal over the greater part of Orissa, the Sunderbans and over a tract of country in the neighbourhood of the Assam hills. In South-West Bengal and North Bengal there were centres of heavy rain, and over considerable areas surrounding these centres excess ranges up to 10 inches in the former and 15 or 20 inches in the latter. In the western and central districts there has been generally a small excess, except in Champaran, which is the only part of Bihar with deficient rainfall, though not to any great extent.

The average fall in North Bengal for the month is 21·9 inches, in East Bengal 17·4, in South-West Bengal and Chota Nagpur nearly 13, in Bihar 11·2, and in Orissa 8·5.

The following table gives a condensed view of the rainfall of the various divisions of Bengal in June, and in each of the previous months of the present year, as compared with the normal values for the same periods. The figures given represent the actual falls expressed as percentages of the normal falls :—

METEOROLOGICAL DIVISIONS.	January.	February.	March.	April.	May.	June.	Actual rainfall of first six months of 1899 expressed as a percentage of the normal fall for the period.
South-West Bengal ...	290	82	17	135	116	122	113
North Bengal ..	270	49	112	93	85	127	112
East " ...	300	169	51	163	137	104	120
Bihar ..	224	56	17	223	101	143	136
Orissa ..	49	38	10	357	144	93	114
Chota Nagpur ..	164	24	Nil	255	85	154	126



The following table gives full data for the comparison of the actual and normal rainfall of the month of June in all districts in the province. The figures are derived from the average and actual rainfall of the rain-recording stations in each district, due allowance being made for the area which each represents. This gives a more accurate average than the arithmetical means given in the monthly meteorological tables. The first column gives the normal district rainfall as determined from the rainfall records of the past 25 years; the second column the district rainfall as determined from the weighted actual rainfalls of the month at the reporting stations in the district; the third column expresses the ratio of the actual district rainfall of the past month to the normal as a percentage, while the fourth gives the percentage variation or the difference of column 3 from 100 :—

Percentage Table for June 1899.

DIVISION.	DISTRICT.	Normal district rainfall for June.	Actual district rainfall for June 1899.	Percentage of actual to normal rainfall.	Percentage excess (+), defect (-).
South-West Bengal	Burdwan	9.18	9.88	107	+ 7
	Birbhum	10.73	13.73	128	+ 23
	Bankura	10.66	13.69	130	+ 20
	Midnapore	9.59	14.35	150	+ 50
	Hooghly	9.70	13.55	140	+ 40
	Howrah	10.6	14.14	139	+ 34
	24 Parganas	10.75	14.4	133	+ 33
	Calcutta	10.74	16.91	168	+ 58
	Nadia	9.82	9.50	97	- 3
	Murshidabad	9.32	10.90	117	+ 17
	Jessore	11.40	13.80	121	+ 21
	Khulna	12.65	12.29	97	- 3
North Bengal	Rajshahi	10.20	14.09	137	+ 37
	Dinajpur	15.32	18.04	118	+ 18
	Jalpaiguri	28.09	38.35	137	+ 37
	Darjeeling	22.16	...	...	...
	Cooch Behar	30.83	40.99	133	+ 33
	Rangpur	19.26	14.51	75	- 25
	Bogra	13.11	13.93	106	+ 6
	Pabna	10.85	13.14	121	+ 21
East Bengal	Dacca	12.91	16.22	126	+ 26
	Mymensingh	17.87	17.08	96	- 4
	Faridpur	12.33	17.21	140	+ 40
	Backergunge	17.23	13.69	79	- 21
	Tipperra	15.70	...	...	...
	Noakhali	23.65	18.11	77	- 23
	Chittagong	25.67	...	...	...
Bihar	South Lushai Hills	17.87	16.62	92	- 8
	Patna	6.70	9.92	148	+ 48
	Gaya	5.79	13.63	234	+ 134
	Shahabad	5.44	...	...	...
	Saran	6.89	7.05	102	+ 2
	Champaran	9.94	12.73	128	+ 28
	Muzaffarpur	7.49	16.02	134	+ 34
	Darbhanga	7.76	9.17	118	+ 18
	Monghyr	6.96	9.68	139	+ 39
	Bhagalpur	8.33	9.55	116	+ 16
Orissa	Purnea	12.67	18.86	134	+ 34
	Malda	9.93	16.45	166	+ 66
	Sonthal Parganas	9.01	13.25	147	+ 47
	Cuttack	10.14	...	...	...
	Balasore	8.83	10.51	119	+ 19
	Puri	8.47	4.10	48	- 52
	...	...	...	...	...
Chota Nagpur	Hazaribagh	7.90	13.85	175	+ 75
	Ranchi	8.14	13.77	169	+ 69
	Palamau	6.34	11.68	187	+ 87
	Manbhum	9.23	13.77	149	+ 49
	Singbhum	8.83	9.48	107	+ 7



The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the Province for the month of June 1899:—

METEOROLOGICAL DIVISIONS.	TEMPERATURE.							RAINFALL.						
	Highest observed during month.	Lowest observed during month.	Averages for month.			Average mean of month above or below normal mean of month.	Of month.			Rainy days.			Since 16th May 1899.	
			Of highest of each day.	Of lowest of each day.	Of mean for each day.		Average.	Normal average.	Variation.	Average number in month.	Normal average number in month.	Variation.		
South-West Bengal	107.8	73.7	91.6	78.7	85.3	-1.0	12.78	10.46	+2.32	14.12	18.45	+1.67	17.24	18.73
North Bengal	97.8	70.2	87.8	76.9	82.4	-0.2	21.03	17.23	+4.65	18.24	14.35	+3.69	29.06	23.07
East	95.8	68.3	80.8	70.8	81.8	-0.7	17.37	10.00	+0.68	17.36	15.72	+1.64	29.88	22.33
Bihar	114.5	70.8	94.6	79.0	86.8	-0.4	11.28	7.86	+3.35	12.45	8.66	+3.60	12.84	9.02
Orissa	104.4	73.1	90.2	79.5	84.9	-1.4	8.55	9.20	-0.65	12.20	10.18	+2.02	11.94	12.80
Chota Nagpur*	110.0	69.0	94.1	77.0	85.0	+0.3	12.43	8.06	+1.35	13.04	10.11	+2.93	13.66	9.90
Assam	93.7	60.7	85.9	75.4	80.0	-1.0								

\* Daltonganj not included.

METEOROLOGICAL OFFICE, BENGAL,  
The 11th July 1899.

C. LITTLE,  
Meteorological Reporter to the Govt. of Bengal.

**Abstract of the Results of Meteorological Observations taken at the Alipore Observatory in the month of June 1899.**

	Inches.	Date.	Hour.
The mean pressure of the month ... ..	29.587		
The average pressure of June from 24 years' registers ... ..	29.549		
The highest pressure in the month ... ..	29.724	11th	10
The lowest pressure in the month ... ..	29.455	14th	16
The range of pressure ... ..	0.269		
	Hours.		
The total number of hours of bright sunshine during the month ...	32.7		
The maximum possible number of hours of sunshine ...	403.4		
	°		
The mean temperature of the month ... ..	84.4		
The average temperature of June from 24 years' registers ... ..	85.0		
The highest temperature in the month ... ..	97.2	1st	
The lowest temperature in the month ... ..	73.2	11th	
The range of temperature during the month ... ..	24.0		
The mean daily range of temperature ... ..	12.3		
The greatest range of temperature in one day ... ..	22.0	11th	
	Per cent.		
The mean humidity of the month ... ..	85		
The average humidity of June from 24 years' registers ... ..	81		
	Inches.		
The mean vapour tension of the month ... ..	0.995		
The average vapour tension of June from 9 years' registers ... ..	0.998		
The mean cloud proportion of the month ... ..	7.92		
The average cloud proportion of June from 22 years' registers ... ..	7.03		
	Ins.		
The total rainfall of the month ... ..	16.94		
The total rainfall indicated by a Beckley's self-registering rain-gauge (mouth of the gauge about 52 feet above the ground) ... ..	16.94		
The average fall of June from 48 years' registers ... ..	12.08		
The greatest fall in 24 hours ... ..	4.42	28th	
	Days.		
The number of rainy days in the month ... ..	19		
The average number of rainy days in June from 24 years' registers ... ..	19		
	°		
The mean maximum equilibrium temperature of solar radiation during the month ... ..	142.5		
The mean difference of sun and air temperatures ... ..	52.0		
The greatest sun temperature ... ..	155.6	12th.	
The greatest excess of sun over air temperature ... ..	64.3	12th.	
The mean temperature of the nocturnal radiation thermometer on woollen cloth ... ..	77.4		
The mean depression of the nocturnal radiation thermometer below the minimum air temperature at 4 feet above the ground ... ..	1.1		
The greatest depression of the nocturnal radiation thermometer below the minimum air temperature ... ..	3.1	5th.	
	Miles.		
The mean movement of the wind per day ... ..	146.1		
The greatest movement of the wind in one day ... ..	260.0	9th	
The greatest movement of the wind in one hour ... ..	18.0	6th, 11 to noon and 3 to 4 P.M.	
The number of hours with winds from each of the 8 points— N. 4, N.E. 3, E. 12, S.E. 114, S. 311, S.W. 223, W. 36, N.W. 12, Calm 5.			

The results of observations at the Alipore Observatory are not rigorously comparable with the registers of past years (at the Park Street Observatory). The barometer is about 3 feet higher at Alipore, and, other things being equal, reads therefore .003 lower. The diurnal range of temperature is also greater at Alipore, and the mean temperature apparently about 0.5° higher; and, finally, the thermometer which furnished the record of temperature at the Surveyor-General's Office during 20 years and upwards is found to read 0.6 higher than the Kew Standard thermometer, which is the standard of reference at the present Observatory.

G. W. KÜCHLER,

METEOROLOGICAL OFFICE, GOVT. OF INDIA,  
Calcutta, the 10th July 1899.

For Meteorological Reporter to the Govt. of India.

Results of the Meteorological Observations taken at the Alipore Observatory from  
2nd to 8th July 1899.

Month	Date	Maximum in m.m.	Number of hours of bright sunshine.	Mean pressure barometer at 32° Fahr.	TEMPERATURE.				HYGROMETRY.				WIND.		Rain.	WEATHER.
					Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Prevailing direction.	Miles recorded.		
1899.				Inches.	°	°		°		Inches	°	%			Inches.	
July	2nd	148.4	1.6	29.478	86.2	92.4	12.2	80.2	83.4	1.109	82.4	89	SSW ...	85	1.14	Chiefly cloudy, o, p.
"	3rd	150.4	3.2	453	85.5	92.9	12.7	80.2	82.6	1.076	81.5	89	SSW and SSE ...	87	0.66	Chiefly cloudy, o, p, t.
"	4th	152.7	2.0	450	84.3	92.4	11.5	80.9	81.3	1.030	80.1	88	SE and SSE ...	82	0.96	Chiefly cloudy, o, g, p, t, <.
"	5th	152.7	6.2	444	85.6	92.6	13.4	79.2	81.6	1.026	80.0	84	S by E, ENE and variable.	95	0.50	Partially cloudy, d, p, t.
"	6th	138.3	Nil	426	82.5	87.7	9.7	78.0	80.5	1.014	79.7	91	ENE, NNE and variable.	110	3.22	Cloudy, o, p, t, d.
"	7th	136.4	2.4	504	82.3	87.4	10.0	77.4	79.3	0.962	78.1	87	W by S and WNW	172	1.02	Chiefly cloudy, o, d, p.
"	8th	144.6	1.6	561	84.8	91.3	12.1	79.2	80.4	.979	78.6	81	SSW and S ...	96	Nil	Day chiefly cloudy, night clear.

The mean pressure of the seven days ... .. Inches. 29.474

The average pressure of the corresponding period for 24 years, Surveyor-General's Office ... .. 29.552

The total number of hours of bright sunshine ... .. Hours. 17.0

The maximum possible number of hours of sunshine ... .. 94.0

The mean temperature of the seven days ... .. 84.5

The average temperature of the corresponding period for 24 years, Surveyor-General's Office ... .. 83.7

The extreme variation of temperature ... .. 15.5

The maximum temperature ... .. 92.9

The highest velocity of the wind in one hour ... .. Miles. 10

The mean relative humidity ... .. 87

The average relative humidity of the corresponding period for 24 years, Surveyor-General's Office ... .. 85

The total fall of rain from 2nd to 8th July 1899 ... .. Inches. 7.50

The average fall of the corresponding period for 24 years, Surveyor-General's Office ... .. 2.86

The total fall from 1st January to 8th July 1899 ... .. 37.13

The average fall of the corresponding period for 24 years, Surveyor-General's Office ... .. 24.82

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h., 10h., 16h., and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard, Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o, overcast; g, gloomy; d, drizzling rain; p, passing temporary showers; t, thunder; <, lightning.

## Vital Statistics of the Districts of Bengal for the month of May 1899.

Districts.	Diseases.	Population under registration.	BIRTHS.		DEATHS.												AVERAGE OF CORRESPONDING MONTHS OF PREVIOUS FIVE YEARS.	REMARKS.			
			Number registered.	Ratio per 1,000 of population.	CHOLERA.		SMALL-POX.		FEVER.		DYSENTERY AND DIARRHOEA.		INJURY.		OTHER CAUSES.				TOTAL OF ALL CAUSES.		
					ed.	Ratio per 1,000 of population.	Number registered.	Ratio per 1,000 of population.	Number registered.	Ratio per 1,000 of population.	Number registered.	Ratio per 1,000 of population.	Number registered.	Ratio per 1,000 of population.	Number registered.	Ratio per 1,000 of population.			Number registered.	Ratio per 1,000 of population.	Number registered.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Burdwan	Burdwan	1,301,880	5,304	44.76	7	0.05	3	0.02	2,075	17.88	63	4.8	35	2.4	197	4.40	3,104	27.24	3,580	30.84	
Bhikampur	Bhikampur	728,354	4,316	49.80	7	0.05	1	0.01	1,151	17.28	14	1.2	8	0.8	614	9.19	1,787	26.76	1,940	29.28	
Bankura	Bankura	1,068,028	10,083	45.72	140	0.02	15	0.03	3,331	15.36	131	1.2	27	0.7	1,113	7.09	2,601	28.44	2,671	28.80	
Midnapore	Midnapore	2,631,516	2,631	30.96	152	1.08	...	...	1,785	20.64	132	1.44	67	0.6	376	4.32	2,502	28.52	2,540	29.99	
Eloughly, including Seram-pur.	Eloughly, including Seram-pur.	1,094,296	2,480	38.88	106	1.56	3	0.3	884	15.56	244	3.72	25	0.34	515	8.04	1,607	29.85	1,674	29.16	
Howrah	Howrah	1,402,033	4,084	29.76	134	1.84	16	0.09	2,333	17.56	101	0.60	85	0.8	110	2.52	3,584	29.84	3,547	29.52	
24-Parganas	24-Parganas	1,681,869	7,707	45.84	115	1.02	4	0.05	3,912	27.76	241	4.20	32	0.48	1,087	19.08	1,981	34.50	1,900	33.30	
Calcutta	Calcutta	1,644,108	6,251	43.20	303	2.16	7	0.4	2,913	27.44	44	0.28	138	0.84	588	4.20	4,013	29.28	4,218	30.90	
Nadia	Nadia	1,260,946	4,313	33.30	44	0.36	13	0.19	2,244	24.84	1	0.008	85	0.56	409	3.84	2,806	29.58	3,147	30.10	
Murshidabad	Murshidabad	1,488,827	3,241	33.84	211	1.44	1	0.005	3,734	24.84	12	0.07	78	0.48	421	2.64	4,516	28.80	4,884	29.61	
Jessore	Jessore	1,177,683	3,637	36.96	219	1.86	15	0.13	1,015	19.44	23	0.19	115	0.96	300	2.40	2,800	28.56	2,973	29.12	
Khulna	Khulna	1,145,460	4,015	35.48	122	1.06	15	0.13	4,381	37.44	12	0.09	39	0.34	298	2.40	4,958	41.24	5,231	38.10	
Bangshahi	Bangshahi	1,432,670	5,470	44.16	77	0.60	4	0.01	4,808	34.84	28	0.18	113	0.79	54	0.44	5,238	42.36	5,409	40.90	
Dinapore	Dinapore	689,786	1,970	34.80	...	...	...	...	2,894	41.64	54	0.38	8	0.36	117	1.32	4,800	28.80	4,940	37.24	
Jalpaiguri	Jalpaiguri	228,314	81	35.04	109	0.44	1	0.04	4,319	35.84	13	0.07	32	0.12	305	1.92	4,860	28.80	4,940	37.24	
Debbel	Debbel	2,065,404	6,551	39.72	182	1.80	23	0.24	1,927	35.84	1	0.01	33	0.48	115	1.00	1,780	27.84	1,857	27.88	
Rangpur	Rangpur	706,035	3,353	36.36	82	0.56	...	...	4,131	35.84	1	0.01	33	0.48	115	1.00	1,780	27.84	1,857	27.88	
Koera	Koera	1,861,223	3,448	31.90	38	0.28	...	...	4,131	35.84	1	0.01	33	0.48	115	1.00	1,780	27.84	1,857	27.88	
Palna	Palna	2,305,612	7,077	30.84	215	0.66	...	...	4,131	35.84	1	0.01	33	0.48	115	1.00	1,780	27.84	1,857	27.88	
Dacca	Dacca	2,305,612	7,077	30.84	215	0.66	...	...	4,131	35.84	1	0.01	33	0.48	115	1.00	1,780	27.84	1,857	27.88	
Mymensingh	Mymensingh	2,305,612	7,077	30.84	215	0.66	...	...	4,131	35.84	1	0.01	33	0.48	115	1.00	1,780	27.84	1,857	27.88	
Backergunge	Backergunge	2,305,612	7,077	30.84	215	0.66	...	...	4,131	35.84	1	0.01	33	0.48	115	1.00	1,780	27.84	1,857	27.88	
Chittagong	Chittagong	2,305,612	7,077	30.84	215	0.66	...	...	4,131	35.84	1	0.01	33	0.48	115	1.00	1,780	27.84	1,857	27.88	
Tippera	Tippera	2,305,612	7,077	30.84	215	0.66	...	...	4,131	35.84	1	0.01	33	0.48	115	1.00	1,780	27.84	1,857	27.88	
Nikhali	Nikhali	1,782,935	5,570	40.08	39	0.24	...	...	3,290	21.72	27	0.12	110	0.79	673	3.72	3,071	27.80	3,403	32.28	
Chittagong	Chittagong	1,068,433	3,766	44.52	39	0.36	3	0.02	3,405	41.52	15	0.12	65	0.94	392	3.72	2,754	27.80	2,754	27.80	
South Lushai Hills	South Lushai Hills	1,290,127	5,246	48.72	20	0.12	10	0.08	2,681	24.12	17	0.12	83	0.6	153	1.32	2,069	27.60	4,039	37.66	Not under registration.
Patna	Patna	1,772,352	5,945	40.20	162	1.08	10	0.06	2,657	17.88	283	1.66	89	0.60	1,068	7.32	4,295	28.56	4,788	39.40	
Gaya	Gaya	2,136,331	8,597	48.24	8	0.03	54	0.24	4,047	22.64	35	0.12	91	0.48	830	4.92	5,367	38.60	5,367	38.60	
Shahabad	Shahabad	2,960,370	6,819	39.60	121	0.60	...	...	4,078	33.64	35	0.12	71	0.36	709	4.08	6,004	32.04	4,573	28.32	
Saran	Saran	2,405,045	10,033	41.96	...	0.00	...	...	2,818	33.64	290	1.90	167	0.60	3,297	15.96	4,389	32.04	5,911	31.68	
Champanar	Champanar	1,630,405	6,213	40.20	...	...	...	...	2,908	18.72	29	0.12	103	0.72	1,316	7.32	4,389	27.72	4,023	31.68	
Muzaffarpur	Muzaffarpur	2,312,587	10,866	48.00	10	0.08	13	0.04	4,313	19.09	148	0.60	171	0.72	1,211	7.32	6,335	28.80	9,083	43.22	
Darbhanga	Darbhanga	11,068	47.28	...	2	0.068	2	0.008	5,646	24.12	354	0.96	134	0.48	1,298	5.52	7,310	31.90	10,091	43.90	
Monohar	Monohar	2,034,021	8,063	47.52	4	0.24	69	0.36	3,497	20.52	28	0.12	65	0.48	801	4.08	4,515	26.52	6,083	35.04	
Bhagalpur	Bhagalpur	3,083,086	7,744	45.60	6	0.02	74	0.30	4,431	21.84	19	0.10	54	0.24	552	3.94	4,756	27.96	6,940	35.04	
Purnea	Purnea	1,941,038	5,882	36.48	...	...	...	...	5,705	33.96	6	0.03	34	0.12	187	0.72	6,084	35.04	5,617	29.99	
Maida	Maida	814,910	2,968	43.44	40	0.72	15	0.07	2,838	34.90	18	0.08	45	0.24	408	2.90	2,330	37.20	1,766	26.99	
Sonthal Parganas	Sonthal Parganas	1,734,775	6,070	47.64	4	0.02	15	0.07	2,838	18.00	15	0.08	45	0.24	408	2.90	3,122	31.36	3,321	22.68	
Cuttack	Cuttack	1,487,471	10,298	65.72	201	1.66	626	3.96	2,171	33.44	456	2.64	127	0.72	1,071	10.59	5,312	32.88	4,020	24.84	
Balasore	Balasore	994,025	5,824	70.20	203	3.20	60	0.72	2,171	9.06	255	2.64	61	0.60	1,071	12.48	4,407	30.12	2,078	21.78	
Puri	Puri	844,668	4,375	56.44	259	3.94	475	6.00	507	6.56	260	3.84	29	0.60	1,071	16.08	2,830	36.76	1,933	24.79	
Angul and Khondmals	Angul and Khondmals	1,164,821	6,060	59.44	3	0.08	12	0.12	2,043	21.00	90	0.19	58	0.48	554	5.64	2,689	27.60	2,804	29.76	Not under registration.
Hazaribagh	Hazaribagh	1,128,881	4,417	46.96	...	...	...	...	1,128	15.12	118	0.19	58	0.48	554	5.64	2,689	27.60	2,804	29.76	
Ranchi	Ranchi	1,128,881	4,417	46.96	...	...	...	...	1,128	15.12	118	0.19	58	0.48	554	5.64	2,689	27.60	2,804	29.76	
Palaman	Palaman	1,128,881	4,417	46.96	...	...	...	...	1,128	15.12	118	0.19	58	0.48	554	5.64	2,689	27.60	2,804	29.76	
Manikpur	Manikpur	1,128,881	4,417	46.96	...	...	...	...	1,128	15.12	118	0.19	58	0.48	554	5.64	2,689	27.60	2,804	29.76	
Singbham	Singbham	1,128,881	4,417	46.96	...	...	...	...	1,128	15.12	118	0.19	58	0.48	554	5.64	2,689	27.60	2,804	29.76	
Total	Total	71,032,517	254,748	49.96	5,369	3.64	1,534	2.4	112,290	29.32	3,888	0.0	3,180	4.8	33,351	5.52	179,945	30.36	178,498	30.19	
Average of corresponding month of previous five years	Average of corresponding month of previous five years	...	179,938	33.31	3,331	3.84	2,004	2.4	133,191	29.83	3,700	0.0	2,830	3.6	23,639	3.72	178,498	30.19	...	...	
Difference + or -	Difference + or -	...	+74,750	+19.60	-3,000	-0.30	-1,170	-0.4	+8,936	+1.44	+98	Equal	+340	+1.2	+10,715	+1.80	+1,457	+2.4	...	...	

OFFICE OF SANITARY COMMISSIONER FOR BENGAL,

H. J. DYSON, Major, I.M.S., F.R.C.S.,

## Vital Statistics of Towns in Bengal with a population of 20,000 and over during the month of May 1899.

Districts.	Towns.	Population under registra- tion.	BIRTHS.		DEATHS.										AVERAGE OF CORRESPONDING MONTH OF PRE- VIOUS FIVE YEARS.		REMARKS.				
			Number Registered.	Ratio per 1,000 of population.	CHOLERA.		SMALL-POX.		FEVER.		DYSENTERY AND DIARRHŒA.		INJURY.		OTHER CAUSES.			TOTAL OF ALL CAUSES.			
					Number Registered.	Ratio per 1,000 of population.	Number Registered.	Ratio per 1,000 of population.	Number Registered.	Ratio per 1,000 of population.	Number Registered.	Ratio per 1,000 of population.	Number Registered.	Ratio per 1,000 of population.	Number Registered.	Ratio per 1,000 of population.		Number Registered.	Ratio per 1,000 of population.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Bardhaman Midnapore Hooghly Howrah	1. Bardhaman	34,477	60	20.48	1	34	...	...	46	15.96	9	3.19	3	...	9	3.19	68	23.64	88	20.00	
	2. Midnapore	32,554	117	43.44	...	14	...	...	62	19.33	13	4.44	...	...	23	7.16	88	27.36	88	20.00	
	3. Hooghly and Chinsura	33,066	56	20.24	...	14	...	...	45	16.32	16	5.76	...	...	23	7.16	88	27.36	88	20.00	
	4. Howrah	33,066	66	21.96	...	10	...	...	74	24.60	20	6.00	...	...	16	5.76	168	26.04	105	30.00	
24-Paraganas	5. Consolide-Chitpur	116,038	226	26.94	...	...	...	...	149	15.34	46	5.04	...	...	86	8.76	300	30.84	288	29.52	
	6. Manikiala	31,433	32	13.12	...	4	...	...	13	4.66	...	2.28	...	...	6	2.28	300	30.84	288	29.52	
	7. Barnagore	32,865	31	11.28	...	2	...	...	17	6.12	...	2.28	...	...	6	2.28	300	30.84	288	29.52	
	8. South Suburban	34,278	38	12.60	...	2	...	...	45	16.80	15	5.16	...	...	18	5.16	27	11.04	40	14.32	
Calcutta Nadia Murshidabad Raishahi Pabna Dacca Chittagong	9. Garden Beach	41,718	76	21.94	...	1	...	...	45	12.84	6	1.32	...	...	14	3.96	111	38.76	85	29.64	
	10. South Barrackpore	27,924	49	21.00	...	...	...	...	51	21.84	3	1.32	...	...	6	3.04	87	36.72	158	36.72	
	11. including Fittaguh Municipality.	26,647	33	10.68	...	3	...	...	41	14.76	9	3.00	...	...	8	3.04	63	24.44	58	26.72	
	12. Nalhati	28,724	46	18.48	...	...	...	...	50	20.16	...	4.20	...	...	...	...	...	...	...	...	
Patna Gaya Arrah Buxar Chhapra Muzaffarpur	13. Calcutta	681,566	767	13.44	...	115	...	...	603	8.76	241	4.20	...	...	1,087	19.08	1,981	34.80	1,930	33.36	
	14. Krishnagar	26,566	65	21.96	...	1	...	...	35	16.44	...	...	...	...	...	...	...	...	...	...	
	15. Santipur	30,457	58	21.96	...	...	...	...	68	28.66	...	...	...	...	...	...	...	...	...	...	
	16. Baranpore	23,315	41	20.88	...	...	...	...	23	9.90	...	...	...	...	...	...	...	...	...	...	
Bihar Patna Gaya Arrah Buxar Chhapra Muzaffarpur	17. Rajshahi	21,407	63	34.68	...	...	...	...	63	35.28	...	...	...	...	...	...	...	...	...	...	
	18. Banarjanj	23,867	52	16.44	...	...	...	...	20	10.92	...	...	...	...	...	...	...	...	...	...	
	19. Dacca	23,867	106	24.12	...	...	...	...	92	17.32	...	...	...	...	...	...	...	...	...	...	
	20. Chittagong	24,069	42	20.88	...	...	...	...	92	17.32	...	...	...	...	...	...	...	...	...	...	
Bihar Patna Gaya Arrah Buxar Chhapra Muzaffarpur	21. Patna	195,192	389	27.60	...	60	...	...	175	12.60	44	3.12	...	...	...	...	...	...	...	...	
	22. Bihar	47,723	173	44.16	...	...	...	...	55	15.80	...	...	...	...	...	...	...	...	...	...	
	23. Gaya	44,610	113	36.24	...	...	...	...	47	12.60	...	...	...	...	...	...	...	...	...	...	
	24. Arrah	60,365	162	24.12	...	...	...	...	171	25.44	...	...	...	...	...	...	...	...	...	...	
Bihar Patna Gaya Arrah Buxar Chhapra Muzaffarpur	25. Buxar	22,713	89	35.00	...	...	...	...	53	27.06	...	...	...	...	...	...	...	...	...	...	
	26. Chhapra	22,713	129	46.92	...	...	...	...	75	19.08	...	...	...	...	...	...	...	...	...	...	
	27. Muzaffarpur	49,192	106	25.56	...	...	...	...	60	19.48	...	...	...	...	...	...	...	...	...	...	
	28. Patna	21,497	192	40.08	...	...	...	...	53	27.06	...	...	...	...	...	...	...	...	...	...	
Bihar Patna Gaya Arrah Buxar Chhapra Muzaffarpur	29. Haider	73,561	192	31.32	...	...	...	...	64	15.06	...	...	...	...	...	...	...	...	...	...	
	30. Manikpur	87,077	205	29.76	...	...	...	...	13	6.00	...	...	...	...	...	...	...	...	...	...	
	31. Benares	69,106	172	29.76	...	...	...	...	64	15.06	...	...	...	...	...	...	...	...	...	...	
	32. Quilack	47,196	103	25.16	...	...	...	...	64	15.06	...	...	...	...	...	...	...	...	...	...	
Bihar Patna Gaya Arrah Buxar Chhapra Muzaffarpur	33. Balasore	20,776	96	25.44	...	...	...	...	64	15.06	...	...	...	...	...	...	...	...	...	...	
	34. Puri	28,704	41	17.04	...	...	...	...	20	10.80	...	...	...	...	...	...	...	...	...	...	
	35. Ranchi	29,306	62	36.60	...	...	...	...	21	12.36	...	...	...	...	...	...	...	...	...	...	
	36. Ranchi	29,306	62	36.60	...	...	...	...	21	12.36	...	...	...	...	...	...	...	...	...	...	
Bihar Patna Gaya Arrah Buxar Chhapra Muzaffarpur	Total of all towns with a population of 20,000 and over	2,273,167	4,436	23.40	...	309	...	...	2,490	13.08	598	3.42	125	...	2,112	11.04	5,647	99.76	6,203	33.00	
	Average of correspond- ing month of previous five years	...	3,664	19.32	...	998	...	...	2,911	15.36	594	3.72	115	...	2,000	7.80	6,203	33.00	...	...	
	Difference + or -	...	+ 772	+ 4.08	...	- 633	...	...	- 421	- 2.28	+ 4	Equal	+ 10	Equal	+ 612	+ 3.24	- 616	- 3.24	...	...	

OFFICE OF SANITARY COMMISSIONERS FOR BIHAR

OFFICE OF SANITARY COMMISSIONER FOR BENGAL,  
The 8th July 1899.H. J. DYSON, Major, I.M.S., F.R.C.S.,  
Sanitary Commissioner for Bengal.



## IRRIGATION DEPARTMENT, BENGAL.

*Abstract statement showing Tollage on Canals in Bengal classed as Major Works for the month of May 1899, as compared with that of the corresponding month of the previous year.*

CANALS.	TOLLAGE, 1899-1900.			TOLLAGE, 1898-99.		
	During the month.	To end of the month.		During the month.	To end of the month.	
1	2	3		4	5	
<i>Orissa Circle.</i>	Rs. A. P.	Rs. A. P.		Rs. A. P.	Rs. A. P.	
Taldanda Canal System	2,829 0 9	2,829 0 9		.....	6,990 2 11	
Kendrapara ditto	2,246 13 11	8,518 6 9		6,311 10 7	9,099 11 11	
High Level Canal, Range I	* .. ..	1,350 8 0		816 10 3	4,017 3 0	
Ditto, " II		328 14 0		111 0 6	664 15 3	
Ditto, " III		57 7 0		47 5 3	315 2 9	
Jajpur Canal		77 3 6		7 12 3	29 8 0	
Total Orissa Circle ...	5,075 14 8	13,161 8 0		7,294 6 10	21,106 11 10	
<i>South-Western Circle.</i>						
Midnapore Canal ...	7,880 13 6	17,156 7 6		9,723 3 9	15,723 7 6	
Hijili Tidal Canal ...	5,118 13 9	11,016 10 3		9,396 7 0	19,633 1 9	
Total South-Western Circle ...	12,999 11 3	28,173 1 9		19,119 10 9	35,356 9 3	
<i>Sone Circle.</i>						
Patna Canal System ...	4,071 6 3	8,946 15 6		191 9 0	5,133 10 6	
Arrah ditto ...	3,343 4 3	7,843 2 9		5,240 9 6	8,497 13 3	
Buxar ditto ...	1,317 15 6	3,029 4 9		1,183 8 9	1,236 8 3	
Total Sone Circle ...	8,732 10 0	19,819 7 0		6,615 11 3	14,868 0 0	
GRAND TOTAL ...	26,808 3 11	61,154 0 9		33,029 12 10	71,831 5 1	

## Government Transport Service.

CANAL.	TOLLAGE, 1899-1900.						TOLLAGE, 1898-99.					
	During the month.			To end of the month.			During the month.			To end of the month.		
	Passen- gers.	Goods.	Total re- ceipts.	Passen- gers.	Goods.	Total re- ceipts.	Passen- gers.	Goods.	Total re- ceipts.	Passen- gers.	Goods.	Total re- ceipts.
1	2	3	4	5	6	7	8	9	10	11	12	13
<i>Orissa Circle.</i>	No.	Mds.	Rs. A. P.	No.	Mds.	Rs. A. P.	No.	Mds.	Rs. A. P.	No.	Mds.	Rs. A. P.
High Level* ...	...	...	.....	1,174	1,319	1,433 3 9	2,237	856	1,518 15 3	6,324	1,302	5,036 3 8
Total Orissa Circle ...	...	...	.....	1,174	1,319	1,433 3 9	2,237	856	1,518 15 3	6,324	1,302	5,036 3 8

## Assessed Tollage Receipts.

CANALS.	EARNINGS, 1899-1900.			EARNINGS, 1898-99.		
	During the month.	To end of the month.		During the month.	To end of the month.	
1	2	3		4	5	
	Rs. A. P.	Rs. A. P.		Rs. A. P.	Rs. A. P.	
Orissa Canals ...	5,075 14 8	14,594 11 9		8,813 6 1	26,142 15 6	
Midnapore Canal ...	7,880 13 6	17,156 7 6		9,723 3 9	15,723 7 6	
Hijili Tidal Canal ...	5,118 13 9	11,016 10 3		9,396 7 0	19,633 1 9	
Sone Canals ...	8,732 10 0	19,819 7 0		6,615 11 3	14,868 0 0	
Total ...	26,808 3 11	62,587 4 6		34,548 12 1	76,367 8 9	

\* There was no traffic during the month on account of closure of the canals for annual repairs.

CALCUTTA,  
The 11th July 1899.

A. H. O. MACCARTHY,  
Under-Secy. to the Govt. of Bengal.

## IRRIGATION DEPARTMENT, BENGAL.

*Abstract statement showing Tollage on Canals in Bengal classed as Minor Works and Navigation for the month of May 1899, as compared with that of the corresponding month of the previous year.*

CANALS.	TOLLAGE, 1899-1900.		TOLLAGE, 1898-99.	
	During the month.	To end of the month.	During the month.	To end of the month.
1	2	3	4	5
	Rs.   A. P.	Rs.   A. P.	Rs.   A. P.	Rs.   A. P.
Calcutta and Eastern Canals ...	21,226 13 3	41,148 13 6	16,553 2 6	36,455 0 0
Tolly's Nala ...	5,169 15 9	11,224 5 3	2,442 10 9	6,084 7 6
Total ...	26,396 13 0	52,373 2 9	18,995 13 3	42,539 7 6
Orissa Coast Canal ...	3,726 9 0	7,943 13 6	7,260 4 6	16,141 6 6
Nadia Rivers ...	4,024 15 0	8,695 11 0	2,640 1 6	7,021 11 0
GRAND TOTAL ...	34,148 5 0	68,412 11 3	28,896 3 3	65,702 9 0

CALCUTTA,  
The 11th July 1899.

A. H. C. MACCARTHY,  
Under-Secy. to the Govt. of Bengal.

## CIRCULAR AND EASTERN CANALS.

*Approximate Return of Traffic for the week ending Saturday, the 8th July 1899, as compared with the corresponding week of the previous year.*

NATURE OF CARGO.	WEEK ENDING SATURDAY, THE 8TH JULY 1899.			WEEK ENDING SATURDAY, THE 9TH JULY 1898.		
	Number of boats.	Weight of cargo.	Tollage.	Number of boats.	Weight of cargo.	Tollage.
	No.	Mds.	Rs.	No.	Mds.	Rs.
Rice and paddy ...	460	74,750	1,229	171	17,175	203
Jute ...	8	3,226	69	15	8,100	176
Firewood ...	96	73,125	1,098	63	42,300	583
Other articles ...	763	2,61,895	2,993	620	1,60,705	1,872
Total ...	1,327	4,12,995	5,379	869	2,26,280	2,834

## EAST INDIAN RAILWAY.

Statement of Goods Traffic in staples carried during the four weeks ending 27th May 1899 as compared with the same period of 1898.

STAPLES.	1898.		1899.		INCREASE.		DECREASE.	
	Weight.	Freight.	Weight.	Freight.	Weight.	Freight.	Weight.	Freight.
Coal & Coke carried for the public and foreign railways	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.
Cotton, raw	66,10,530	9,07,143	73,23,650	9,81,138	7,13,120	73,095	.....	.....
	52,380	30,134	53,717	30,392	1,337	0,169	.....	.....
Cotton, manufactured—								
1.—Twist & Yarn, European	5,152	5,301	4,314	4,759	.....	.....	838	542
2.—Ditto, Indian	27,081	11,379	34,961	14,384	7,880	3,205	.....	.....
3.—Piece-goods—European	2,06,301	2,30,230	1,93,205	2,01,284	.....	.....	13,096	18,946
4.—Ditto—Indian	10,549	8,718	22,969	16,114	0,460	7,396	.....	.....
Drugs and Chemicals—								
1.—Intoxicating, other than opium	644	408	460	378	.....	.....	184	30
2.—Non-intoxicating	9,979	8,311	12,164	11,610	2,185	3,299	.....	.....
Dyes and Tans—								
1.—Indigo	3,111	2,316	875	601	.....	.....	2,236	1,715
2.—Myrabolama	7,879	2,237	9,180	2,950	2,051	732	.....	.....
3.—Cutch	4,638	1,003	3,223	1,505	5-5	562	.....	.....
4.—Turmeric	16,179	13,001	23,846	18,524	7,669	4,923	.....	.....
5.—Alizarine and aniline dyes	415	204	2,189	232	1,774	.....	.....	32
6.—Al (Morinda citrifolia)	78	32	236	75	178	43	.....	.....
7.—Others	10,267	2,227	3,345	1,333	.....	.....	6,922	894
Grain and Pulse—								
1.—Wheat	33,00,643	8,29,900	15,33,861	2,92,020	.....	.....	17,73,783	4,37,871
2.—Rice in the husk	78,000	7,094	1,19,385	12,027	41,385	3,833	.....	.....
3.—Rice not in the husk	4,37,748	69,237	5,84,719	1,00,901	140,971	40,144	.....	.....
4.—Jowar and bajra	4,695	692	11,723	2,790	7,028	2,104	.....	.....
5.—Gram & pulse	3,07,637	79,354	4,53,783	1,12,239	146,290	32,885	.....	.....
6.—Others	39,614	7,767	69,426	13,080	29,812	6,319	.....	.....
Hides and Skins—								
1.—Hides of cattle	25,871	18,046	45,503	26,760	10,632	8,723	.....	.....
2.—Skins of sheep, &c.	9,088	8,867	17,549	9,850	7,561	3,983	.....	.....
Horns	600	224	725	310	117	86	.....	.....
Hemp and other fibres	71,359	14,234	30,791	6,370	.....	.....	40,568	7,864
Jute—								
1.—Raw	38,329	8,087	24,000	5,437	.....	.....	13,429	3,250
2.—Gunny-bags and cloth	1,20,732	1,27,814	1,39,697	64,606	.....	.....	60,155	63,298
Leo—								
1.—Stick	15,288	4,920	18,288	7,897	3,000	2,967	.....	.....
2.—Rholl	13,927	11,219	17,110	13,781	3,683	2,662	.....	.....
Leather, manufactured	5,963	3,983	4,402	4,513	.....	328	901	.....
Liquors—								
1.—Ale and Beer	15,978	5,380	11,458	4,181	.....	.....	4,520	1,390
2.—Spirits of all kinds, including country spirit	2,125	1,845	861	1,471	.....	.....	1,264	374
3.—Wines	2,304	4,009	2,609	3,685	.....	.....	285	1,014
4.—All other sorts, including toddy and fermented liquor, other than ale and beer	.....	.....	204	44	204	44	.....	.....
Metals—								
1.—Copper, unwrought	852	1,124	35	45	.....	.....	817	1,079
2.—Brass, ditto	3,305	3,132	1,613	870	.....	.....	1,792	2,162
3.—Copper, wrought	1,023	1,394	739	479	.....	.....	283	755
4.—Brass, ditto	18,688	6,685	17,198	7,936	.....	1,351	1,870	.....
5.—Iron and steel—								
(a) Cast	23,838	5,313	20,309	5,649	.....	536	3,529	.....
(b) Unwrought	20,166	1,123	18,356	1,175	.....	63	1,780	.....
(c) Wrought	87,708	20,750	70,769	34,279	.....	11,521	10,934	.....
(d) Manufactures of iron and steel	18,592	10,967	42,451	18,359	23,859	7,392	.....	.....
6.—Zinc and spelter	2,707	2,107	2,393	1,555	.....	.....	314	562
7.—Others	8,783	7,637	9,079	6,774	296	.....	.....	1,835
Oil—								
1.—Kerosine	70,204	27,058	1,25,600	36,887	40,543	9,829	.....	.....
2.—Castor	3,194	985	3,477	1,094	283	99	.....	.....
3.—Coconut	5,244	2,408	7,093	2,356	1,849	.....	.....	.....
4.—Mustard and rape	7,772	2,320	13,595	5,491	5,823	4,171	.....	492
5.—Others	4,714	2,653	3,953	2,466	.....	.....	761	97
Oilseeds—								
1.—Linseed	7,29,783	1,05,747	11,54,414	3,10,534	4,24,631	1,34,787	.....	.....
2.—Rape and mustard	4,45,607	1,13,237	4,67,750	1,03,316	22,143	.....	.....	.....
3.—Til or jujili	10,036	1,812	27,634	4,219	16,974	2,407	.....	9,713
4.—Poppy	1,12,937	37,969	2,32,013	66,107	1,19,076	28,138	.....	.....
5.—Earthnuts	11	6	168	20	97	14	.....	.....
6.—Castor	1,09,090	20,837	84,542	21,256	.....	419	24,557	.....
7.—Others	7,639	1,444	6,584	1,064	.....	.....	1,053	390
Opium	46,291	30,808	12,028	9,216	.....	.....	33,663	21,592
Paper and pasteboard	19,668	11,771	21,097	8,564	2,029	.....	.....	3,227
Provisions—								
1.—Ghee	29,103	18,983	34,861	31,155	8,688	12,173	.....	.....
2.—Dried fruits and nuts	3,370	2,897	8,604	4,334	5,123	1,437	.....	.....
3.—Potatoes	44,278	9,365	35,091	5,955	.....	.....	.....	.....
4.—Others	59,314	31,039	98,089	29,671	0,775	.....	5,297	3,400
Railway plant & rolling-stock carried for the public & foreign railways—								
1.—Locomotive engines & tenders & parts thereof	3,377	1,072	5,003	2,514	1,626	1,438	.....	.....
2.—Carriages & trucks & parts thereof	4,114	1,054	2,374	624	.....	.....	1,840	430
3.—Materials—								
(a) Steel rails & fish-plates	289	6,233	10,007	6,898	17,727	6,066	.....	.....
(b) Sleepers and keys of steel and cast-iron	11,209	2,940	3,701	1,004	.....	.....	7,508	1,936
(c) Other sorts	98,073	15,154	76,945	16,032	.....	1,476	22,728	.....
Salt	5,14,090	51,037	5,53,442	1,04,346	39,436	22,309	.....	.....

SUPPLEMENT TO THE CALCUTTA GAZETTE, JULY 12, 1899.

1205

STAPLES.	1898.		1899.		INCREASE.		DECREASE.	
	Weight.	Freight.	Weight.	Freight.	Weight.	Freight.	Weight.	Freight.
<b>Saltpetre, &amp;c.—</b>								
1.—Saltpetre	30,408	18,190	45,451	22,025	8,025	9,435		
2.—Other saline substances	18,240	4,804	40,685	13,861	27,445	9,067		
<b>Silk, raw—</b>								
1.—Foreign			25	10	25	10		
2.—Indian	1,161	610	1,560	1,090	408	474		
<b>Silk piece-goods—</b>								
1.—Foreign								
2.—Indian	70	157	62	161	12	4		
<b>Spices—</b>								
1.—Betel-nuts	16,822	13,800	25,704	21,810	8,882	8,010		
2.—Pepper	2,510	2,292	2,017	1,012			493	380
3.—Ginger	1,542	515	2,085	1,351	1,143	886		
4.—Chillies	13,670	9,590	12,762	8,090			817	1,590
5.—Cardamoms	494	248	1,145	789				
6.—Others	1,000	560	904	507	647	541	96	65
<b>Stone and lime</b>	4,07,596	59,311	5,80,802	71,350	1,73,207	12,045		
<b>Sugar—</b>								
1.—Refined	12,171	3,551	23,007	11,576	11,180	8,025		
2.—Unrefined	3,06,255	60,809	4,09,003	77,553	1,03,654	16,696		
<b>Tea—</b>								
1.—Foreign	63	22					53	23
2.—Indian	2,096	1,022	5,305	2,734	2,369	2,512		
<b>Timber</b>	1,22,509	17,331	1,27,324	17,332	4,815	1		
<b>Tobacco</b>	1,00,122	42,743	1,04,285	44,295	4,163	1,552		
<b>Wool—</b>								
(a) Raw	4,117	2,802	4,098	1,023	581			879
(b) Manufactured—								
1.—Carpets and rugs	522	670	600	807				
II.—Piece-goods, European	153	315	14	28		137	139	287
III.—" Indian	1,478	1,666	1,257	1,513			191	153
IV.—Other sorts of manufactures								
<b>All other articles of merchandise—</b>								
1.—Bones	42,046	10,181	37,044	5,913			5,002	1,268
2.—Firewood	2,586	619	20,458	2,188	19,872	1,860		
3.—Indigo seed	7,600	3,216	11,314	3,465	3,605	250		
4.—Oil-cake	91,007	15,385	1,23,090	19,478	31,990	4,093		
5.—Paints & colours	17,171	4,077	19,600	4,880	2,409	703		
6.—Seeds other than oilseeds	43,781	20,063	1,13,209	17,340	69,428	27,274		
7.—Wooden articles	11,542	5,037	12,027	4,009				
8.—Others	5,34,531	1,01,631	6,16,748	1,03,246	485	1,414	2,18,786	128
<b>Total</b>	1,61,18,684	35,70,970	1,62,23,979	37,27,938	1,05,205			1,45,040
<b>Military stores</b>	10,756	18,867	17,930	23,988	7,180	5,121		
<b>Coal for railway</b>	12,18,146	80,935	8,28,122	56,207			3,90,224	34,728
<b>Railway materials</b>	11,92,163	53,005	13,30,710	45,311	1,38,547			1,291
<b>Live-stock</b>		4,080		2,206				2,174
<b>Total</b>	1,85,39,749	37,35,066	1,83,95,747	35,56,678			1,44,002	1,81,388

C. W. CLARKE, Assistant Auditor.

TRAFFIC AUDIT OFFICE, GOODS DIVISION, JAMALPUR, the 7th July 1899.

## Weekly Return of Traffic Receipts on Indian Railways.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 17th June 1899 on 1,712.25 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
	(a)	Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	361,131	3,22,700 5 0	47,00,832 10	8,81,150 5 0	24,605 0 0	12,28,461 10 0	94,754	176,643	271,397
Or per mile of railway ...	...	188 7 6	...	...	14 5 11	717 7 3	...	...	...
For previous 23 weeks of half-year ...	*7,505,020	*80,50,177 1 0	10,00,41,710 0	2,01,84,421 0 0	15,61,317 0 0	2,87,94,015 1 0	\$2,108,854	\$3,922,375	\$6,121,229
Total for 24 weeks ...	8,267,051	83,81,883 6 0	11,07,42,542 10	2,10,65,571 5 0	5,75,922 0 0	3,00,23,376 11 0	2,393,608	4,099,018	6,392,626
COMPARISON.									
Total for corresponding week of previous year ...	320,554	2,91,490 5 5	44,91,080 10	8,10,120 5 7	14,050 4 0	11,15,060 15 0	80,106	167,196	257,304
Per mile of railway corresponding week of previous year ...	...	170 15 3	...	475 1 11	8 3 10	654 5 0	...	...	...
Total for corresponding 24 weeks of previous year ...	8,262,000†	85,89,382 1 3	10,73,41,538 10	2,10,00,400 13 3	5,21,826 6 11	3,01,11,600 5 5	2,256,625	4,086,433	6,342,057

(a) The increase is in outward traffic, chiefly from stations in B. and L. districts on account of marriage parties and the Dasoharah bathing festival.

(b) The increase is chiefly in food-grain traffic to Calcutta stations.

† Added No. of passengers 14,375 and Rs. 5,735 on account of difference between the approximate and audited figures for the weeks ended 2nd and 13th May 1899.

‡ Deducted Mds. 2,18,085 and " 21,291

§ Audited figures up to the week ended 13th May 1899.

## EAST INDIAN RAILWAY.

Approximate Return of Traffic for the last 13 days of June 1899 on 1,712.25 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
	(a)	Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the period ...	724,485	6,70,463 0 0	80,64,444 10	15,15,000 14 0	50,368 0 0	22,45,501 7 0	175,051	319,131	494,212
Or per mile of railway ...	...	391 0 1	...	885 5 10	34 10 10	1,311 9 9	...	...	...
For previous 23 weeks of half-year ...	*8,826,661	*84,37,619 6 0	11,11,10,022 10	2,03,40,891 5 0	24,05,034 0 0	2,91,39,344 11 0	2,294,003	4,114,148	6,408,251
Total for 24 weeks ...	8,983,146	91,08,082 15 0	11,91,75,800 20	2,18,62,881 3 0	4,64,402 0 0	3,14,55,346 2 0	2,469,144	4,433,310	6,902,453
COMPARISON.									
Total for corresponding 12 days of previous year ...	612,522	5,34,532 15 4	70,90,041 10	13,21,600 15 7	36,048 4 11	15,05,251 3 10	153,428	285,902	439,330
Per mile of railway corresponding period of previous year ...	...	313 7 11	...	776 14 3	21 2 3	1,111 9 6	...	...	...
Total for corresponding 23 weeks of previous year ...	8,886,492	91,70,541 12 11	11,51,96,704 30	2,17,40,048 2 6	5,07,2 8 11	3,14,24,463 10 7	2,410,053	4,371,394	6,781,447

(a) The increase is due to movements of marriage parties, chiefly in A and B districts, and to the moon eclipse of 23rd June 1899.

(b) The increase is chiefly in coal and grain traffic to Kidderpore Docks and Howrah.

† Added No. of passengers 11,004 and Rs. 44,131 on account of difference between the approximate and audited figures for the weeks ended 20th and 27th May 1899.

‡ Do. ditto 439 and " 3,073 on account of supplemental figures for 31st March 1899.

§ Do. ditto 167 and " 8,592 on account of special trains, fares for conveyance of employees of Government Telegraph Department and construction lines and toll on the S. P. Railway passenger traffic at Delhi.

¶ Added Mds. 65,981 and deducted " 43,583 on account of difference between the approximate and audited figures for the weeks ended 20th and 27th May 1899.

\* Do. " 2,62,399 and deducted " 1,375 on account of supplemental figures for 31st March 1899.

† Do. " 40,000 and " 12,360 on account of some foreign inward invoices not having been included in previous returns.

‡ Deducted " 6,087 on account of demurrage accrued on wagons under load detained at Lillicoan by Carriage and Wagon Department.

§ Do. " 6,45,989 on account of rebate on coal.

¶ Do. " 6,087 on account of difference between the approximate and audited figures for the weeks ended 20th and 27th May 1899.

\* Do. " 2,57,829 on account of mileage and demurrage, and hire of vehicles which have been shown as credit to expenditure.

† Added " 1,015 on account of supplemental figures for 31st March 1899.

‡ Do. " 71,413 on account of sundry receipts not having been included in previous returns.

§ Audited figures up to the week ended 27th May 1899.



## TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for week ended 17th June 1899 on 22.23 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	(a) 18,936	(a) 4,778 1 0	17,030 0	602 4 0	0 0 0	5,479 5 0	1,079	109	1,188
Or per mile of railway ...	.....	214 15 0	.....	31 2 3	0 6 6	246 7 9	.....	.....	.....
For previous 23 weeks of half-year ...	* 554,212	* 1,40,130 12 0	† 3,96,163 20	† 14,810 5 0	3226 0 0	1,55,176 1 0	\$25,016	\$3,073	\$28,089
Total for 24 weeks ...	573,168	1,44,908 13 0	4,13,193 20	15,511 9 0	233 0 0	1,60,655 6 0	26,095	3,182	29,277
COMPARISON.									
Total for corresponding week of previous year ...	17,106†	3,712 3 5	26,386 0	814 9 0	8 1 0	4,534 13 5	1,098	90	1,188
Per mile of railway corresponding week of previous year ...	.....	166 15 10	.....	36 10 3	0 5 10	203 15 11	.....	.....	.....
Total for corresponding 24 weeks of previous year ...	621,132‡	1,59,206 8 7	4,06,432 0	16,198 5 0	284 0 0	1,76,670 13 7	26,986	2,640	29,626

(a) The increase is in outward traffic on account of Dusharai bathing festival.

\* Added No. of passengers 2,390 and

Rs. 181

† Do. Mds. 3,213 and

72

‡ Deducted

2

§ Audited figures up to the week ended 13th May 1899.

## TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for the last 13 days of June 1899 on 22.23 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the period ...	(a) 40,087	(a) 9,931 10 0	18,183 10	601 3 0	15 0 0	10,547 13 0	1,986	214	2,200
Or per mile of railway ...	.....	446 13 3	.....	27 0 8	0 10 10	474 7 9	.....	.....	.....
For previous 24 weeks of half-year ...	* 570,111	* 1,45,396 13 0	† 4,12,530 20	† 15,534 9 0	† 195 0 0	1,61,316 6 0	\$26,007	\$3,073	\$29,170
Total for 25 weeks ...	616,198	1,55,328 7 0	4,30,722 30	16,135 12 0	400 0 0	1,71,804 3 0	28,083	3,297	31,370
COMPARISON.									
Total for corresponding 13 days of previous year ...	36,070	8,200 6 2	10,338 20	771 0 0	17 2 6	8,937 8 8	1,922	146	2,068
Per mile of railway corresponding period of previous year ...	.....	369 4 9	.....	34 10 11	0 12 4	404 12 0	.....	.....	.....
Total for corresponding 25 weeks of previous year ...	637,203‡	1,67,417 15 0	4,31,707 0	17,042 14 0	422 6 6	1,84,833 3 6	28,903	2,792	31,700

(a) The increase is due to the moon eclipse of 23rd June 1899.

\* Added number of passengers 2,343 and

Rs. 485

† Deducted Mds. 654 and added

23

‡ Ditto

11

§ Added

161

§ Audited figures up to the week ended 27th May 1899.

## DELHI-UMBALLA-KALKA RAILWAY.

Approximate Return of Traffic for week ended 17th June 1899 on 162.24 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	21,053	16,179 11 0	1,03,771 0	12,692 9 0	71 0 0	28,843 4 0	7,009	3,778	10,850
Or per mile of railway ...	.....	99 11 8	.....	77 9 10	0 7 0	177 12 6	.....	.....	.....
For previous 23 weeks of half-year ...	* 443,073	* 3,51,260 10 0	† 20,87,507 30	† 2,42,224 1 0	† 1,767 0 0	6,25,260 11 0	\$1,04,431	\$70,363	\$343,784
Total for 24 weeks ...	464,726	3,97,440 5 0	21,91,378 30	2,54,816 10 0	1,838 0 0	6,54,103 13 0	1,71,529	83,131	254,660
COMPARISON.									
Total for corresponding week of previous year ...	20,513	15,736 5 5	91,349 0	12,502 11 0	51 14 9	28,350 15 11	7,287	3,457	10,754
Per mile of railway corresponding week of previous year ...	.....	96 15 11	.....	77 9 11	0 5 1	174 14 11	.....	.....	.....
Total for corresponding 24 weeks of previous year ...	673,803	4,68,516 1 3	26,07,204 0	3,63,022 11 3	1,967 1 0	8,63,505 14 3	188,243	107,433	295,670

\* Added No. of passengers 2,034 and deducted

Rs. 65

† Do. Mds. 19,078 and

26

‡ Deducted

35

§ Audited figures up to the week ended 13th May 1899.

§ On account of difference between the approximate and audited figures for the weeks ended 6th and 13th May 1899.

## DELHI-UMBALLA-KALKA RAILWAY.

Approximate Return of Traffic for the last 13 days of June 1899 on 162·24 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Passengers carried.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
	No.	Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the period ...	40,334	(a) 20,331 0 0	1,83,658 20	20,064 2 0	131 0 0	50,516 2 0	12,543	5,771	18,314
Or per mile of railway ...	.....	180 15 3	.....	123 10 8	0 11 11	311 5 10	.....	.....	.....
For previous 24 weeks of half-year ...	466,838*	4,02,320 5 0*	16,20,808 30†	2,42,576 10 0†	836 0 0‡	6,46,782 15 0	171,440§	88,027§	259,467§
Total for 25½ weeks ...	507,173	4,32,651 5 0	17,80,557 10	2,42,640 12 0	957† 0 0	6,86,240 1 0	183,983	89,398	273,381
COMPARISON.									
Total for corresponding 12 days of previous year ...	34,707	31,934 6 7	2,33,906 0	19,900 11 8	135 0 9	51,970 3 0	12,649§	6,832§	19,481§
Per mile of railway corresponding period of previous year ...	.....	196 13 4	.....	122 10 7	0 13 4	320 5 3	.....	.....	.....
Total for corresponding 25½ weeks of previous year ...	613,775	5,41,037 14 2	23,99,739 0	3,68,594 10 4	7,757 0 4	9,17,399 8 10	200,994‡	114,256‡	315,151‡

(a) The decrease is due to the inclusion in the corresponding period of 1898 of the earnings from five extra troop trains run from N.W. Ry. to I. M. Ry. in April 1898. Added No. of passengers 1,701 and Rs. 3,781 on account of difference between the approximate and audited figures for the weeks ended 20th and 27th May 1899.

Do. do. 246 and .. 835 on account of supplemental figures for 31st March 1899.

Do. do. 167 and .. 255 on account of conveyance of employees of the Government Telegraph Department.

Deducted Mds. 60,550 and .. 23 on account of difference between the approximate and audited figures for the weeks ended 20th and 27th May 1899.

Do. " 5,20,000 and .. 12,000 on account of revenue coal and stores for the half-year.

Added " 170 and deducted .. 217 on account of supplemental figures for 31st March 1899.

Deducted .. 81 on account of difference between the approximate and audited figures for the weeks ended 20th and 27th May 1899.

Do. .. 921 on account of sundry receipts having been excess included in previous return.

§ Audited figures up to the week ended 27th May 1899.

## EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., DACCA, K.-D., AND ASSAM-BIHAR SECTIONS.)

Approximate Return of Traffic and Mileage for last 13 days of June 1899 on 834 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings, including ferry.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for 13 days ...	426,400	1,95,690 0 0	11,36,230 0	201,910 0 0	97,270 0 0	4,94,570 0 0	65,871	60,333	126,204
Or per mile of railway ...	256	117 0 0	881 0	121 0 0	51 0 0	289 0 0	.....	.....	.....
For previous 24 weeks of half-year ...	5,078,975	24,04,526 0 0	2,15,93,240 0	29,56,145 0 0	3,80,134 0 0	57,49,805 0 0	840,633	840,105	1,680,738
Total for 26 weeks ...	5,505,375	26,00,216 0 0	2,27,27,479 0	31,58,055 0 0	4,80,404 0 0	62,44,675 0 0	906,504	906,438	1,812,942
COMPARISON.									
Total for corresponding 12 days of previous year ...	389,092	1,54,141 0 0	18,32,092 0	2,20,306 0 0	69,278 0 0	4,43,817 0 0	70,590	33,396	103,986
Per mile of railway corresponding week of previous year ...	238	94 0 0	1,120 0	135 0 0	29 0 0	258 0 0	.....	.....	.....
Total to corresponding date of previous year ...	5,407,193	26,60,330 0 0	2,41,23,864 0	30,60,563 0 0	4,57,544 0 0	67,84,437 0 0	922,948	910,877	1,833,825

\* Excluding steamer earnings.

† Audited up to 13th May 1899.

Increase is due to 13 days' traffic, against 12 days in the corresponding period.

## DACCA STATE RAILWAY.

Approximate Return of Traffic and Mileage for last 13 days of June 1899 on 86 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings, including ferry.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for 13 days ...	43,470	16,640 0 0	26,387 0	2,000 0 0	180 0 0	18,980 0 0	5,001	1,637	7,538
Or per mile of railway ...	253	97 0 0	153 0	12 0 0	1 0 0	110 0 0	.....	.....	.....
For previous 24 weeks of half-year ...	579,166	1,82,520 0 0	7,77,073 0	67,402 0 0	4,973 0 0	2,54,934 0 0	64,225	26,643	100,868
Total for 26 weeks ...	622,636	1,99,200 0 0	8,04,053 0	69,462 0 0	5,152 0 0	2,73,814 0 0	69,226	29,300	108,526
COMPARISON.									
Total for corresponding 12 days of previous year ...	43,784	16,154 0 0	27,260 0	1,000 0 0	1,563 0 0	14,765 0 0	4,588	—1,130	3,458
Per mile of railway corresponding week of previous year ...	254	71 0 0	217 0	6 0 0	9 0 0	86 0 0	.....	.....	.....
Total to corresponding date of previous year ...	641,467	1,88,875 0 0	9,42,901 0	86,305 0 0	6,463 0 0	2,79,983 0 0	66,701	46,033	112,734

\* Audited up to 13th May 1899.

## MYMENSINGH-JAGANNATHGANJ RAILWAY.

Approximate Return of Traffic and Mileage for last 13 days of June 1899 on 33 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings, including ferry.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for 13 days ...	5,760	Rs. A. P. 1,390 0 0	Mds. S. 1,080 0	Rs. A. P. 120 0 0	Rs. A. P. 1,510 0 0	Rs. A. P. 1,510 0 0	830	1,935†	1,915
Or per mile of railway ...	87	31 0 0	35 0	2 0 0	23 0 0	23 0 0	...	...	...
For previous 26 weeks of half-year ...	86,712	22,000 0 0	144,179 0	5,617 0 0	63 0 0	27,770 0 0	6,638	14,901	21,439
Total for 26 weeks ...	92,472	23,480 0 0	145,829 0	5,737 0 0	63 0 0	29,280 0 0	7,308	16,000	23,374
COMPARISON.									
Total for corresponding week of previous year ...	...	...	...	...	...	...	...	...	...
Or per mile of railway corresponding week of previous year ...	...	...	...	...	...	...	...	...	...
Total to corresponding date of previous year ...	...	...	...	...	...	...	...	...	...

\* Audited up to 13th May 1899.

† Includes ballast train-miles 1,007.

## BRAHMAPUTRA-SULTANPUR RAILWAY.

Approximate Return of Traffic and Mileage for the last 13 days of June 1899 on 24.75 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (including ferry).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for 13 days ...	2,910	Rs. A. P. 920 0 0	Mds. S. 9,210 0	Rs. A. P. 790 0 0	Rs. A. P. 1,730 0 0	Rs. A. P. 1,730 0 0	350	1,935†	1,735
Or per mile of railway ...	59	10 0 0	186 0	16 0 0	30 0 0	35 0 0	...	...	...
For previous 11 weeks of half-year ...	18,105	5,201 0 0	61,007 0	3,608 0 0	153 0 0	9,082 0 0	1,540	6,160	8,020
Total for 11 weeks ...	21,015	6,211 0 0	70,217 0	4,398 0 0	203 0 0	10,812 0 0	2,190	7,563	9,764
COMPARISON.									
Total for corresponding week of previous year ...	...	...	...	...	...	...	...	...	...
Or per mile of railway corresponding week of previous year ...	...	...	...	...	...	...	...	...	...
Total to corresponding date of previous year ...	...	...	...	...	...	...	...	...	...

\* Audited up to 13th May 1899.

† Includes ballast train-miles 900.

## COOCH BEHAR STATE RAILWAY.

Approximate Return of Traffic and Mileage for the last 13 days of June 1899 on 33.73 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings, including ferry.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Passengers carried.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for 13 days ...	3,690	Rs. A. P. 1,860 0 0	Mds. S. 12,170 0	Rs. A. P. 1,570 0 0	Rs. A. P. 3,510 0 0	Rs. A. P. 3,510 0 0	800	11,008	1,008
Or per mile of railway ...	88	57 0 0	180 0	23 0 0	90 0 0	90 0 0	...	...	...
For previous 26 weeks of half-year ...	87,846	16,232 0 0	1,59,015 0	15,054 0 0	3,014 0 0	33,300 0 0	5,301	16,161	21,672
Total for 26 weeks ...	41,736	17,082 0 0	1,70,185 0	16,024 0 0	3,104 0 0	36,810 0 0	5,990	17,200	23,303
COMPARISON.									
Total for corresponding 13 days of previous year ...	1,609	673 0 0	6,253 0	448 0 0	167 0 0	1,503 0 0	335	9,000	9,210
Or per mile of railway corresponding week of previous year ...	48	20 0 0	141 0	10 0 0	50 0 0	50 0 0	...	...	...
Total to corresponding date of previous year ...	37,609	13,921 0 0	2,10,134 0	18,003 0 0	2,406 0 0	26,230 0 0	3,676	15,833	19,600

\* Excluding ferry.

† Audited up to 13th May 1899.

‡ Includes ballast train-miles 334.

## SEGOWLIE-RAKSAUL BRANCH RAILWAY.

(WORKED BY THE B. N. W. RAILWAY.)

*Audited Return of Traffic for week ending 20th May 1899 on 18 miles open.*

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Passengers carried.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
	No.	Rs. A. P.	Mds.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week on 18 miles open ...	95	204 12 9	10,301	841 3 0	8 14 0	554 13 9	337	167	504
Or per mile of railway ...	54.17	11 6 0	572.28	18 15 3	0 7 11	30 13 2	...	...	...
For previous 104 weeks of half-year ...	11,311	2,613 11 8	83,764	2,645 11 0	62 15 0	5,325 5 9	4,399	2,143	6,542
Total for 114 weeks ...	12,196	2,618 8 5	99,065	2,986 14 0	71 13 0	5,880 3 5	4,726	2,310	7,036
COMPARISON.									
Total for corresponding week of previous year on 18 miles open ...	...	...	...	...	...	...	...	...	...
Per mile of corresponding week of previous year ...	...	...	...	...	...	...	...	...	...
Total to corresponding date of previous year ...	...	...	...	...	...	...	...	...	...

## SEGOWLIE-RAKSAUL BRANCH RAILWAY.\*

(WORKED BY THE B. N. W. RAILWAY.)

*Approximate Return of Traffic for last 6 days of June 1899 on 18 miles open*

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Passengers carried.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
	No.	Rs.	Mds.	Rs.	Rs.	Rs.			
Total traffic for the week on 18 miles open ...	434	96	2,420	87	7	190	249	112	360
Or per mile of railway ...	24.11	5 33	134.44	4.84	0.39	10 56	...	...	...
For previous 164 weeks of half-year (a) ...	17,345	4,140	1,53,951	4,510	80	9,040	6,441	2,079	8,520
Total for the half-year ...	17,780	4,236	1,55,691	4,597	97	9,230	6,690	2,191	8,881
COMPARISON.									
Total for corresponding week of previous year on 18 miles open ...	...	...	...	...	...	...	...	...	...
Per mile of railway corresponding week of previous year ...	...	...	...	...	...	...	...	...	...
Total to corresponding date of previous year ...	...	...	...	...	...	...	...	...	...

(a) Includes audited figures up to week ending 20th May 1899.  
 NOTE—The line has been closed for traffic from 29th June  
 (vide Agent and Chief Engineer's No. 5637 of 5th July 1899.)

## BENGAL AND NORTH-WESTERN RAILWAY.

*Approximate Return of Traffic for last 6 days of June 1899 on 1,082 miles open*

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated), including steam-boats.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs.	Mds.	Rs.	Rs.	Rs.			
Total traffic for the week on 1,082 miles open ...	116,090	46,790	4,75,180	68,240	21,090*	1,56,110†	22,170	39,102‡	61,272
Or per mile of railway ...	109.14	43.24	439.13	63.83	19.45	144.55	...	...	...
For previous 25 weeks of half-year ...	3,446,363	13,97,656	1,60,56,336	22,50,928	4,39,150	41,07,734	598,610	784,605	1,383,215
Total for the half-year ...	3,564,353	14,44,446	1,74,33,486	23,09,169	4,60,230	42,33,544	620,590	810,707	1,431,297
COMPARISON.									
Total for corresponding week of previous year on 923 miles open ...	95,760	31,537	3,51,604	38,748	24,390	94,675	15,130	18,443§	33,577
Per mile of railway corresponding week of previous year ...	103.73	34.09	379.03	41.99	26.37	102.35	...	...	...
Total to corresponding date of previous year ...	3,240,577	12,99,475	1,42,67,572	18,93,031	4,03,433	35,94,139	513,478	699,899	1,213,377

\* The decrease under sundries in both this and last week's figures was due to an adjustment of Rs. 20,000 on account of Ajodhya and Gogra Ghat ferry charges made in the audited return for last 12 days of June 1898.  
 † Increase due to improvement of traffic on main line and earnings of one day more in this period than in the corresponding period.  
 ‡ Includes 3,538 miles of ballast trains run on open line.  
 § audited figures up to week ending 20th May 1899.  
 || 2,167 miles of ballast trains run on open line.

## ASSAM-BENGAL RAILWAY.

*Approximate Return of Traffic for the period ending 30th June 1899 on 396 miles open for all descriptions of Traffic and an additional 37 miles for goods and parcels traffic only.*

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	46,086	38,663 0 0	4,34,923 0	22,187 0 0	2,843 0 0	63,693 0 0	7,269	13,218	20,487
Or per mile of railway ...	117.92	97.63	1,119.91	56.24	0.67	155.44	18.36	30.53	48.89
For previous 24 weeks of half-year ...	741,604	4,83,151 0 0	63,87,516 0	3,65,936 0 0	17,072 0 0	7,66,121 0 0	91,680	204,800	296,480
Total for 25 weeks ...	788,302	5,21,844 0 0	68,42,439 0	2,97,466 0 0	20,515 0 0	8,29,914 0 0	98,929	217,716	316,645
COMPARISON.									
Total for corresponding week of previous year ...	44,015	34,968 0 0	4,20,354 0	22,589 0 0	1,302 0 0	58,469 0 0	5,473	8,533	13,906
Per mile of railway corresponding week of previous year ...	163.90	121.92	1,431.08	77.10	4.76	203.77	19.14	22.06	41.20
Total to corresponding date of previous year ...	691,789	4,17,563 0 0	61,23,524 0	2,38,244 0 0	17,129 0 0	6,73,045 0 0	80,645	171,605	2,51,710

\* Includes audited figures for week ending 30th May 1899.

## FINANCIAL YEAR.

*Approximate Statement of Gross Receipts of the Assam-Bengal Railway.*

RECEIPTS FOR WEEK ENDING 30TH JUNE 1899.			RECEIPTS FOR WEEK ENDING 30TH JUNE 1898.			TOTAL RECEIPTS FROM 1ST APRIL 1898 TO 30TH JUNE 1899.			TOTAL RECEIPTS FROM 1ST APRIL 1898 TO 30TH JUNE 1898.			Total increase in 1899.	Total decrease in 1899.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
483	Rs. 68,693	Rs. 155.44	393	Rs. 66,849	Rs. 203.77	483	Rs. 3,81,915	...	393	Rs. 3,33,925	...	Rs. 47,990	...





# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, JULY 19, 1899.

## OFFICIAL PAPERS.

[Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.]

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### WEATHER AND CROP REPORT.

For the week ending the 17th July 1899.

**Burdwan.**—Rainfall at Sadar 4·06, Kalna 8·37, Katwa 6·10, Raniganj 4·23. Weather seasonable. Transplanting of *aman* paddy going on briskly. Sugarcane, *til* and jute doing well. Fodder and water sufficient. Cattle-disease in Katwa decreasing. Common rice selling as follows:—

	Srs.	
Sadar	...	17 to 20
Kalna	...	15 to 16½
Katwa	...	17
Raniganj	...	16½

} per rupee.

**Birbhum.**—Rainfall at Sadar 9·38, Rampur Hât 2·82. Weather rainy. Transplantation of paddy going on. Price of common rice at Sadar 18 seers and at Rampur Hât 17½ seers per rupee. Fodder sufficient. No cattle-disease.

**Bankura.**—Rainfall at Bankura 8·72, Vishnupur 4·28. Weather rainy. Transplantation rapidly progressing. Fodder and water sufficient. No cattle-disease reported. Price of common rice at Bankura 17½ seers and at Vishnupur 17½ seers per rupee.

**Midnapore.**—Rainfall at Sadar 11·63, Tamluk 8·49, Ghatal 5·22. Weather seasonable. Transplantation going on. Prospects of sugarcane, jute and flax favourable. Cattle-disease reported from Benapur outpost. Common rice sells as follows:—

	Srs.	
Sadar	... 12 to 20	} per rupee.
Tamluk	... 14½	
Ghatal	... 14 to 17	

**Hooghly.**—Rainfall at Sadar 6·06, Serampore 7·92, Jahansbad 3·31. Sowing of winter paddy going on. Excessive rainfall damaged jute and paddy seedlings. Cattle-disease reported from Pursura. Common rice sells from 12 to 16 seers per rupee.

**Howrah.**—Rainfall at Sadar 5·81, Ulubaria 7·99. Weather cloudy with heavy showers almost every day. Transplantation of *aman* retarded on account of heavy rainfall. Seedlings damaged in places in Ulubaria. Fodder and water sufficient. Common rice sells from 12 to 15 seers per rupee.

**24-Parganas.**—Rainfall at Sadar 6·76, Barasat 6·58, Basirhat 3·43, Diamond Harbour 10·50. Weather rainy. Excessive rainfall has injured the standing crops. Weeding and transplanting operations are at a standstill except at Basirhat, where transplantation of *aman* is reported to be going on. Cattle-disease reported from Basirhat subdivision. Fodder and water sufficient. Common rice sells as follows:—

	Srs.	
Sadar	... 13 to 15	} per rupee.
Barasat	... 16½	
Basirhat	... 18-13ch.	
Diamond Harbour	... 15	

**Nadia.**—Rainfall at Sadar 4·24, Kuahtia 2·97, Meherpur 2·14, Chuadanga 2·40, Ranaghat 3·44. Weather cloudy and rainy. Prospects of standing crops promising. Paddy and jute are being damaged by insects in parts of Chuadanga and Ranaghat subdivisions. Fodder and water sufficient. Price of common rice stationary.

**Murshidabad.**—Rainfall at Sadar 3·70, Kandi 9·10, Jangipur 4·16. Weather cloudy. Transplantation of *aman* is still going on. *Bhadoi* in ear in some places. State of indigo and mulberry favourable. Fodder and water sufficient. Common rice sells as follows:—

	Srs.	
Sadar	... 16	} per rupee.
Kandi	... 18½	
Jangipur	... 18	

**Jessore.**—Rainfall at Sadar 3·84, Jhenida 3·26, Magura 1·79, Narail 1·74, Bangaon 4·55. Weather cloudy and rainy. Weeding of paddy and jute going on. Insects damaging the paddy. Early *aus* paddy is being harvested in Narail. Fodder and water sufficient. Cattle-disease reported from thana Gaighata. Common rice sells as follows:—

	Srs.	
Sadar	... 16 to 19	} per rupee.
Jhenida	... 16	
Magura	... 17 to 20	
Narail	... 20	
Bangaon	... 17 to 18	

**Khulna.**—Rainfall at Sadar 1·47, Bagirhat 2·57, Satkhira 2·78. Weather hot, cloudy and rainy. Cultivation and transplantation of *aman* going on. Fodder and water sufficient. Common rice sells as follows:—

	Srs.	
Sadar	... 19 to 23	} per rupee.
Bagirhat	... 19	
Satkhira	... { 15 and 20 (coarse <i>aus</i> ).	

**Rajshahi.**—Rainfall at Sadar 1·03, Nator 1·5. Prospects of crops good. No cattle-disease. Fodder and water ample. Price of rice ranges from 16 to 22 seers per rupee.

**Dinajpur.**—Average rainfall 4·22. Weather seasonable. Transplantation of *haimanti* paddy has commenced. Cattle-disease reported from five thanas. Fodder and drinking-water plentiful. Rice selling at 18 to 20 seers per rupee.

**Jalpaiguri.**—Rainfall at Sadar 4·48, Alipur Duars 2·59. Weather hot and cloudy. State and prospects of standing crops good. Transplantation of *haimanti* paddy rapidly going on. Fodder and water sufficient. Common rice sells from 10 to 13 seers per rupee.

**Darjeeling.**—Rainfall at Darjeeling 9·95, Siliguri 8·61. Weather seasonable. *Hills*—*Haimanti* paddy being transplanted; *bhutta*, *bhadoi* paddy, and *chota marua* doing well. *Terai*—Jute, *bhadoi*, and *jamera* paddy doing well. Coarse rice sells as follows :—

Srs.				
Hills	...	...	...	8 to 12
Terai	...	...	...	16 to 17
				} per rupee.

*Bhutta* sells at Darjeeling 24 seers and at Kalimpong 40 seers per rupee.

**Rangpur.**—Rainfall at Sadar 2·08, Gaibanda 1·20, Kurigram 3·26, Nilphamari 3·24. Weather hot and rainy. Cutting of *aus* and jute going on. Prospects good. Common rice selling from 16½ to 20 seers per rupee. Fodder and water sufficient. Cattle-disease prevailing in some villages in thana Jaldhaka.

**Bogra.**—Average rainfall 3·54. Harvesting of early *aus* and jute begun in some places. Preparation of land for and transplantation of *aman* going on. Prospects good. Fodder and water ample. Common rice sells from 16 to 23 seers per rupee.

**Pabna.**—Rainfall at Sadar 1·84, Sirajganj 6·17. Weather cloudy and rainy. Prospects of crops good in spite of some damage to low land paddy.

**Dacca.**—Rainfall at Sadar 4·95, Manikganj 2·77, Munshiganj 3·99, Narainganj 5·57. Weather seasonable. Prospects of crops fair. Insects are destroying jute and paddy in Sadar and Munshiganj subdivisions. *Aus* paddy in low lands in Manikganj damaged by sudden rise of water to certain extent. Fodder available. No cattle-disease. Common rice 16 to 20 seers per rupee.

**Mymensingh.**—Rainfall at Sadar 3·73, Kishorganj 9·97, Tangail 7·81, Jamalpur 1·45. Weather dull and showery. Prospects of crops excellent. Condition of cattle good. Fodder and water-supply ample. Common rice selling at 20 seers per rupee.

**Faridpur.**—Rainfall at Sadar 2·67, Goalundo 3·24, Madaripur 3·53. Weather rainy. and seasonable. State and prospects of standing crops generally good. Common rice selling at 17 to 19 seers per rupee.

**Backergunge.**—Rainfall at Sadar 5·39. Weather seasonable. Prospects of crops fair. Common rice sells from 13 to 21 seers per rupee.

**Tippera.**—Rainfall at Sadar 1·60, Brahmanbaria 1·62, Chandpur 5·40. Weather seasonable. Jute being out. *Aus* paddy doing well. Some damage to crops by insects reported from the Brahmanbaria subdivision. Average price of common rice 19 seers per rupee.

**Noakhali.**—Rainfall at Sadar 9·17, Feni 5·98. Transplantation of *aman* commenced. Prospects fair. No cattle-disease. Fodder and water sufficient. Price of common rice 14 to 21 seers per rupee.

**Chittagong.**—Rainfall 7·25. Weather seasonable. Cultivation of *aus* progressing. In places it is being reaped. Lands being prepared for *aman*. Prospects good. Prices stationary. Water and fodder sufficient.

**Patna.**—Rainfall at Sadar 7·40, Barh 13·34, Bihar 9·08, Dinapore 7·74, Hilsa 7·32, Bikram 3·41. The rain will do much damage to the *bhaddi* crops. Transplantation of *marua* continues in some places. Fodder and water for cattle sufficient. No cattle-disease. Common rice in Patna sells at 19 seers per rupee.

**Gaya.**—Rainfall at Sadar 8·15, Jahanabad 5·45, Aurangabad 2·20, Nawada 5·02. Paddy being sown. *Bhadoi* suffered much from excessive rain. Common rice selling at 16 seers per rupee.

**Shahabad.**—Rainfall at Sadar 7·67, Buxar 3·04, Bhabua 2·95, Sasaram 5·25. Sugarcane and *marua* good. *Bhadoi* reported to be damaged in Buxar and Sasaram owing to excessive rain. Twenty deaths out of 47 cases of cattle-disease reported from the Sasaram subdivision. Fodder and water abundant.

**Saran.**—Rainfall at Sadar 11·21, Siwan 4·35, Gopalganj 4·54. Weather rainy and cloudy. Prospects good. Weeding of *bhadoi* crops and transplanting of *aghani* paddy going on. Incessant rain not beneficial to the *bhadoi* crops. Clear and sunny weather very much wanted. Cattle-disease reported from Chatra police-station. Average price of common rice 14·11 seers and of *makai* 25·2 seers per rupee.

**Champaran.**—Rainfall at Motihari 7·00, Bettiah 2·77, Barharwa 6·06, Bagaha 6·62, Ramnagar 2·58. Prospects good. Paddy transplantation continues. *Bhadoi* sowings almost over. Weeding till retarded. *Makai* somewhat damaged by heavy rain. Price of common rice 13½ seers and of maize 22½ seers per rupee.

**Muzaffarpur.**—Rainfall at Sadar 9·05, Hajipur 7·59, Sitamarhi 6·63. *Bhadoi* crops damaged to some extent by excessive and continued rain. A few days' fair weather urgently needed to improve the *bhadoi* crops. Rice being transplanted where practicable. Prices are—Common rice 12 to 15 seers, wheat 16 to 18 seers, barley 23 to 24 seers, *makai* 23 to 24 seers, gram 22 to 23 seers, and *rahar* 20 to 21 seers per rupee.

**Darbhanga.**—Weather cloudy and rainy throughout the week. Rainfall at Sadar 3·66, Madhubani 8·92, Samastipur 11·52. Weeding of *bhadoi* crops is retarded owing to continued and heavy rainfall, which has done damage to the *bhadoi* crops. Cessation of rain for a week is badly wanted. Transplantation of paddy is in progress. Common rice selling at Sadar 13 seers per rupee. Fodder and water sufficient.

**Monghyr.**—Rainfall at Sadar 10·62, Begusarai 4·37, Jamui 2·62. Weather very rainy. Weeding retarded by rain. Transplantation of paddy and *marua* going on. *Bhadoi* sowing continues, but somewhat damaged by excessive rainfall. Rice sells as follows:—

	Srs.			
Monghyr	...	...	...	13 to 15
Begusarai	...	...	...	12 to 15
Jamui	...	...	...	15½
				} per rupee.

**Bhagalpur.**—Weather rainy and cloudy. Rainfall at Sadar 11·23, Banka 5·07, Madhipura 4·81, Supaul 4·02. Heavy rain damaging the *bhadoi* seedlings. Stray cases of cattle-disease reported from the three subdivisions. Common rice sells at 15½ seers per rupee.

**Purnea.**—Rainfall at Sadar 6·56, Kishanganj 1·71, Araria 3·28. Weather rainy. Standing crops not doing well owing to incessant rain. Early-sown *bhadoi* in ear. Transplantation of *aghani* continues. No cattle-disease. Fodder and water sufficient. Common rice sells as follows:—

	Srs.			
Sadar	...	...	...	15
Kishanganj	...	...	...	15
Araria	...	...	...	16
				} per rupee.

**Malda.**—Rainfall at Sadar 3·52, Shibganj 3·16, Gajol 4·18. Weather hot and cloudy with frequent showers of rain. Transplanting of winter rice going on. Prospects good. Common rice sells at 18 seers per rupee.

**Sonthal Parganas.**—Heavy rain, especially in Dumka (10 inches) and Deoghur (13 inches) damaging the Indian-corn crop; prospects otherwise good. Price of common rice 13 to 18 seers, and of maize 17 to 32 seers per rupee. Cattle-disease in Rajmahal.

**Cuttack.**—Rainfall at Sadar 2·08, Jajpur 3·05, Kendrapara 2·02, Banki 1·41. Weather seasonable. *Sarad*, jute and sugarcane growing. *Beali* being weeded. Condition of cattle generally good. Fodder and water sufficient. Common rice sells as follows:—

	S. ch.			
Cuttack	...	...	...	17 1
Jajpur	...	...	...	17 1
Kendrapara	...	...	...	19 11
Banki	...	...	...	17 15
				} per rupee.

**Balasore.**—Rainfall at Sadar 7·63. Sugarcane thriving well. Re ploughing of *sarad* going on. Rice sells from 16 to 24 seers per rupee in the interior, and at 17 seers at Balasore and Bhadrak. Cattle-disease prevailing in chaklas Singla, Dhamnagar, and Chandbali. Fodder and water sufficient.

**Angul.**—Rainfall at Sadar 2·64, Bisipara 8·21. *Bhadoi*, winter rice and sugarcane crops thriving. Broadcasting and puddling of winter rice and transplanting of *mandia* in progress. Common rice sells at 24 seers per rupee at Angul and 15 seers at Khondmals.

**Puri.**—Rainfall at Sadar 2·14, Khurda 3·85. Young plants of *sarad*, *beali* and *mandia* growing well. Puddling commenced in places. Sugarcane and other miscellaneous crops promising. Fodder and water sufficient. Cattle-disease continues. Price of common rice stationary.

**Hazaribagh.**—Rainfall at Sadar 1·94, Giridih 4·86. Weather cloudy and rainy. Rain excessive for *bhadoi* crops. Ploughing and sowing in progress. Common rice sells from 15 to 20 seers per rupee.

**Ranchi.**—Rainfall 4·32. Weather seasonable. Agricultural prospects favourable. Rice sells at Ranchi 16 seers per rupee and in the interior from 16 to 23 seers per rupee. Health of cattle good. Fodder and water sufficient.

**Palaman.**—Rainfall 6·48. Weather seasonable. *Marua* being planted. *Makai* injured to some extent by excessive rain. Sugarcane doing well. Rice sells at 16 seers per rupee.

**Manbhum.**—Rainfall at Sadar 5·74, Gobindpur 4·94. Weather seasonable. Prospects of crops generally good. Cattle-disease reported from thanas Jaldah, Raghunathpur, and Tundi. Fodder and water sufficient. Average price of common rice at Sadar 17½ seers and at Gobindpur 17 seers per rupee. Supply sufficient.

**Singbhum.**—Rain 2·97. Prospects of crops good. Rice sells from 16 to 20 seers per rupee.

**General Summary.**—There was general and heavy rain during the week. A break is now required. The autumn rice and jute crops in parts of South-West Bengal and the *bhadoi* crops in the Patna and Bhagalpur Divisions are reported to have been damaged to some extent, and transplantation of winter rice is retarded in some parts. Damage to crops by insects is reported from parts of Nadia, Jessore, Dacca, and Tippera. There is cattle-disease in several districts, but the fodder-supply is everywhere sufficient. Prices continue practically stationary.

By order of the Lieutenant-Governor of Bengal,

F. A. SLACK,

*Offg. Secretary to the Govt. of Bengal.*

REVENUE DEPARTMENT,  
The 18th July 1899.



**Results of the Meteorological Observations taken at the Alipore Observatory from  
9th to 15th July 1899.**

Month	Date	Maximum in sun.	Number of hours of bright sunshine.	Mean pressure barometer at 32° Fahr.	TEMPERATURE.				HYGROMETRY.				WIND.		Rain.	WEATHER.
					Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Prevailing direction.	Miles recorded.		
1899.				Inches.	°	°	°	°	°	Inches.	°	%			Inches.	
July	9th	147.4	5.7	29.551	85.2	90.6	12.4	78.2	81.0	1.001	79.3	83	W by N, WSW and SW by S.	187	0.27	Partially cloudy, o, p.
"	10th	111.6	Nil	.554	83.0	85.2	8.0	77.2	80.5	1.009	79.5	89	WSW, WNW and SW by S.	105	0.43	Cloudy, o, d, p.
"	11th	146.2	2.6	.512	82.7	88.7	11.5	77.2	80.5	1.013	79.6	91	SW by S and WSW.	125	0.86	Chiefly cloudy, o, d, p.
"	12th	143.4	0.3	.461	83.4	89.4	12.0	77.4	80.9	1.022	79.9	89	W by N and WNW.	115	0.06	Chiefly cloudy, o, d, t.
"	13th	104.0	Nil	.414	81.3	84.4	7.9	76.5	80.1	1.013	79.6	95	WNW and W by N.	147	3.37	Cloudy, o, g, d, p, t, <.
"	14th	115.8	"	.413	80.1	82.3	5.5	76.3	79.0	0.979	78.6	95	WNW and W by S.	231	1.76	Cloudy, o, g, d, p.
"	15th	149.6	1.3	.528	83.6	89.9	11.9	78.0	80.2	.986	78.8	85	WSW and variable	95	0.24	Chiefly cloudy, o, d, p.

The mean pressure of the seven days ... .. Inches. 29.491

The average pressure of the corresponding period for 24 years, Surveyor-General's Office ... .. 29.543

The total number of hours of bright sunshine ... .. Hours. 9.9

The maximum possible number of hours of sunshine ... .. 93.7

The mean temperature of the seven days ... .. 82.8

The average temperature of the corresponding period for 24 years, Surveyor-General's Office ... .. 83.8

The extreme variation of temperature ... .. 14.1

The maximum temperature ... .. 90.6

The highest velocity of the wind in one hour ... .. Miles. 15

The mean relative humidity ... .. 90

The average relative humidity of the corresponding period for 24 years, Surveyor-General's Office ... .. 85

The total fall of rain from 9th to 15th July 1899 ... .. Inches. 6.99

The average fall of the corresponding period for 24 years, Surveyor-General's Office ... .. 2.69

The total fall from 1st January to 15th July 1899 ... .. 44.12

The average fall of the corresponding period for 24 years, Surveyor-General's Office ... .. 27.51

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h., 10h., 16h., and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard, Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o, overcast; g, gloomy; d, drizzling rain; p, passing temporary showers; t, thunder; <, lightning.

METEOROLOGICAL OFFICE, GOVT. OF INDIA,  
Calcutta, the 17th July 1899.

G. W. KUHLER,  
For Meteorological Reporter to the Govt. of India.

CIRCULAR AND EASTERN CANALS.

*Approximate Return of Traffic for the week ending Saturday, the 15th July 1899,  
as compared with the corresponding week of the previous year.*

NATURE OF CARGO.	WEEK ENDING SATURDAY, THE 15TH JULY 1899.			WEEK ENDING SATURDAY, THE 16TH JULY 1898.		
	Number of boats.	Weight of cargo.	Tollage.	Number of boats.	Weight of cargo.	Tollage.
	No.	Mds.	Rs.	No.	Mds.	Rs.
Rice and paddy ... ..	483	68,665	1,092	244	20,825	254
Jute ... ..	7	3,650	57	8	3,425	68
Firewood ... ..	15	7,250	99	52	33,575	510
Other articles ... ..	746	1,98,010	2,608	520	1,41,687	1,834
Total ... ..	1,251	2,78,575	3,851	824	2,02,512	2,666

## Weekly Return of Traffic Receipts on Indian Railways.

## EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., DACCA, K.-D., AND ASSAM-BIHAR SECTIONS.)

Approximate Return of Traffic and Mileage for first 8 days of July 1899 on 834 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings, including ferry.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for 8 days ...	240,650	1,08,800 0 0	6,82,540 0	1,07,080 0 0	6,560 0 0	2,30,440 0 0	37,770	35,835	73,605
Or per mile of railway ...	289	128 0 0	818 0	128 0 0	1 0 0	257 0 0			
For previous weeks of half-year ...	...	...	...	...	...	...	...	...	...
Total for 1 week ...	240,650	1,08,800 0 0	6,82,540 0	1,07,080 0 0	6,560 0 0	2,30,440 0 0	37,770	35,835	73,605
COMPARISON.									
Total for corresponding 9 days of previous year ...	250,157	1,07,903 0 0	9,30,595 0	1,23,718 0 0	9,275 0 0	2,45,896 0 0	42,447	41,136	83,583
Per mile of railway corresponding week of previous year ...	306	133 0 0	1,140 0	157 0 0	3 0 0	292 0 0			
Total to corresponding date of previous year ...	250,157	1,07,903 0 0	9,30,595 0	1,23,718 0 0	9,275 0 0	2,45,896 0 0	42,447	41,136	83,583

\* Excluding steamer earnings.

## DACCA STATE RAILWAY.

Approximate Return of Traffic and Mileage for first 8 days of July 1899 on 86 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings, including ferry.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for 8 days ...	25,280	2,820 0 0	9,700 0	1,160 0 0	140 0 0	10,120 0 0	2,030	1,400	4,430
Or per mile of railway ...	293	103 0 0	113 0	15 0 0	2 0 0	118 0 0			
For previous weeks of half-year ...	...	...	...	...	...	...	...	...	...
Total for 1 week ...	25,280	2,820 0 0	9,700 0	1,160 0 0	140 0 0	10,120 0 0	2,030	1,400	4,430
COMPARISON.									
Total for corresponding 9 days of previous year ...	30,515	3,017 0 0	22,799 0	1,930 0 0	196 0 0	11,143 0 0	3,020	2,000	5,020
Per mile of railway corresponding week of previous year ...	356	105 0 0	261 0	23 0 0	2 0 0	129 0 0			
Total to corresponding date of previous year ...	30,515	3,017 0 0	22,799 0	1,930 0 0	196 0 0	11,143 0 0	3,020	2,000	5,020

## MYMENSINGH-JAGANNATHGANJ RAILWAY.

Approximate Return of Traffic and Mileage for first 8 days of July 1899 on 33 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings, including ferry.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for 8 days ...	2,180	780 0 0	1,250 0	100 0 0	...	880 0 0	300	792*	1,152
Or per mile of railway ...	66	24 0 0	38 0	3 0 0	...	27 0 0			
For previous week of half-year ...	...	...	...	...	...	...	...	...	...
Total for 1 week ...	2,180	780 0 0	1,250 0	100 0 0	...	880 0 0	300	792	1,152
COMPARISON.									
Total for corresponding week of previous year ...	...	...	...	...	...	...	...	...	...
Per mile of railway corresponding week of previous year ...	...	...	...	...	...	...	...	...	...
Total to corresponding date of previous year ...	...	...	...	...	...	...	...	...	...

\* Includes ballast train-miles 624.

## BRAHMAPUTRA-SULTANPUR RAILWAY.

Approximate Return of Traffic and Mileage for the first 8 days of July 1899 on 24.75 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (including ferry).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for 8 days ...	1,900	510 0 0	4,500 0	400 0 0	90 0 0	1,080 0 0	210	1,551	1,761
Or per mile of railway ...	77	21 0 0	185 0	16 0 0	4 0 0	43 0 0			
For previous weeks of half-year									
Total for 1 week	1,910	510 0 0	4,500 0	400 0 0	90 0 0	1,080 0 0	210	1,581	1,791
COMPARISON.									
Total for corresponding week of previous year									
Per mile of railway corresponding week of previous year									
Total to corresponding date of previous year									

\* Includes ballast train-miles 1,344.

## COOCH BEHAR STATE RAILWAY.

Approximate Return of Traffic and Mileage for the first 8 days of July 1899 on 33.73 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings, including ferry.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Passengers carried.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for 8 days ...	2,340	1,020 0 0	12,050 0	790 0 0	80 0 0	1,620 0 0	350	11,040	1,390
Or per mile of railway ...	69	30 0 0	357 0	22 0 0		48 0 0			
For previous weeks of half-year									
Total for 1 week	2,340	1,020 0 0	12,050 0	790 0 0	80 0 0	1,620 0 0	350	1,040	1,390
COMPARISON.									
Total for corresponding 8 days of previous year	1,631	577 0 0	1,751 0	176 0 0	150 0 0	903 0 0	213	183	396
Per mile of railway corresponding week of previous year	74	26 0 0	70 0	8 0 0	1 0 0	25 0 0			
Total to corresponding date of previous year	1,631	577 0 0	1,751 0	176 0 0	150 0 0	903 0 0	213	183	396

\* Excluding ferry.

† Includes ballast train-miles 502.

## BENGAL CENTRAL RAILWAY COMPANY, LIMITED.

Approximate Return of Traffic and mileage for the last 13 days of June 1899 on 125 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for last 13 days of June ...	68,301	31,030 0 0	82,101 0	6,603 0 0	13,197 0 0	50,923 0 0	9,573	4,780	14,403
Or per mile of railway per week	281	134 0 0	334 0	29 0 0	57 0 0	230 0 0			
For previous 24 weeks of half-year	511,018	3,11,006 0 0	15,38,411 0	1,09,050 0 0	64,796 0 0	4,85,516 0 0	130,300	57,760	178,350
Total for 26 weeks	579,319	3,42,026 0 0	16,20,572 0	1,16,343 0 0	77,993 0 0	5,34,436 0 0	139,203	62,538	191,821
COMPARISON.									
Total for corresponding last 13 days of previous year	72,307	18,961 0 0	1,50,453 0	6,621 0 0	9,467 0 0	35,049 0 0	7,324	4,506	11,836
Per mile of railway corresponding week of previous year	339	88 0 0	730 0	27 0 0	41 0 0	163 0 0			
Total to corresponding date of previous year	549,821	3,45,780 0 0	15,63,331 0	1,07,944 0 0	74,339 0 0	5,28,083 0 0	127,562	56,631	184,193

\* Audited up to 20th May 1899.

## DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

						Rs.	A.	P.
Approximate earnings for the first 8 days of July 1899	...	...	...	...	...	15,270	0	0
Ditto for the corresponding period of 1898	...	...	...	...	...	14,757	0	0
Increase	...	...	...	...	...	513	0	0
Receipts per mile for the first 8 days of July 1899	...	...	...	...	...	289	6	7
Ditto for the corresponding period of 1898	...	...	...	...	...	289	5	8
Increase	...	...	...	...	...	10	0	11
Receipts from 1st July to 8th July 1899	...	...	...	...	...	15,270	0	0
Ditto for the corresponding period of 1898	...	...	...	...	...	14,757	0	0
Increase	...	...	...	...	...	513	0	0





# SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, JULY 26, 1899.

## OFFICIAL PAPERS.

[Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.]

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### RESOLUTION ON THE ANNUAL REPORT ON THE POLICE ADMINISTRATION OF THE TOWN OF CALCUTTA AND ITS SUBURBS FOR THE YEAR 1898.

RESOLUTION—No. 36J.R.T.

POLICE.

*Dated Yacht Rhotas, the 18th July 1899.*

READ—

The Annual Report on the Police Administration of the Town of Calcutta and its Suburbs for the year 1898.

The Annual Report of the Chief Presidency Magistrate.

The Annual Report of the Presidency Magistrate of the Northern Division.

Read also—

The Reports for the two previous years and the orders of Government recorded thereon.

Mr. James held the office of Commissioner of Police throughout the year.

2. The following table shows the total number of cognizable and non-cognizable offences reported in the town and suburbs of Calcutta during each of the last five years:—

	1894.	1895.	1896.	1897.	1898.
1	2	3	4	5	6
Town ... ..	41,512	45,291	51,855	52,866	65,058
Suburbs ... ..	13,014	13,589	15,064	13,761	13,428
Total ... ..	54,526	58,880	66,919	66,627	78,486

The abnormal rise in the town in 1898 is entirely due to an enormous increase in the number of applications for summonses under the Municipal Act, 33,105 having been received in the year under report against 17,617 in 1897. Of these applications, no less than 20,106 related to failure to take out licenses for professions, callings and trades, and 3,252 to similar failure in regard to carriages and animals. The increase is explained to have been due to a large number of people having left Calcutta or changed their shops during the scare caused by the plague. It has not been stated that it was wholly due to this cause and, from the inquiries made at the time, the Lieutenant-Governor was greatly disappointed to find that the main cause was nothing less than the laxity of the Municipal subordinates. Had they insisted on the punctual taking out of licenses, and applied for summonses against defaulters in due time, the Magistrates' Courts would not have been swamped with 14,416 applications in the month of June 1898. This matter formed the subject of correspondence with the Corporation; measures were taken to assist the Magistrates in the disposal of the work as quickly as possible and, after much delay, a system was introduced, which ought to have been adopted long before, for ensuring that neglect in taking out licenses shall have reasonably prompt notice and action. But it is altogether wrong that the Criminal Courts should be used as the ordinary method for enforcing the payment of taxes, and the Select Committee on the Calcutta Municipal Bill have most properly introduced a procedure for the recovery of arrears of these taxes, which will very greatly reduce the necessity for proceeding against defaulters in the Courts and prevent, the Lieutenant-Governor hopes, the possibility of the recurrence of a state of affairs, which justly excited very strong comment.

The table below compares the crime reported during the past five years in the town and suburbs together, showing separately cognizable and non-cognizable crime, and offences under the Indian Penal Code and under the Municipal and other laws:—

	1894	1895.	1896.	1897.	1898.
1	2	3	4	5	6
Cognizable—					
Penal Code ... ..	7,492	6,836	8,116	9,109	8,786
Miscellaneous ... ..	23,316	24,392	26,714	28,019	26,708
Non-cognizable—					
Penal Code ... ..	6,277	6,760	6,608	6,259	5,479
Miscellaneous ... ..	17,441	20,892	25,481	23,240	37,513
Total ... ..	54,526	58,880	66,919	66,627	78,486

The figures of cognizable crime for 1897 and 1898 given in the report have been found incorrect on investigation. The errors show much carelessness, which must be avoided in future.

3. In the following statement are shown the cognizable and non-cognizable cases which were sent up by the Police or taken up direct by the Magistrates during the last two years and the number tried and their results, and also the division of work between the Courts of the Presidency and Suburban Magistrates:—

COURT.	CASES INSTITUTED.			CASES TRIED.				NUMBER OF CASES ENDING IN CONVICTION.			
	Cognizable cases sent up by the Police.	Cognizable cases taken up by the Magistrate direct.	Non-cognizable cases.	Cognizable cases sent up by the Police.	Cognizable cases taken up by the Magistrate direct.	Non-cognizable cases.	Total.	Cognizable cases sent up by the Police.	Cognizable cases taken up by the Magistrate direct.	Non-cognizable cases.	Total.
1	2	3	4	5	6	7	8	9	10	11	12
Northern Division Court	13,515	804	2,301	12,495	477	835	13,737	12,300	296	741	13,337
Southern ditto	19,134	430	1,731	8,254	244	269	9,137	7,063	221	442	5,326
Bench Court	3,531	334	22,702	2,061	191	7,396	10,538	2,856	29	5,809	8,394
High Court	...	...	...	...	...	...	...	22,793	540	6,102	30,031
Total	26,480	1,574	26,814	23,050	932	8,810	33,412	22,819	540	12,253	35,612
Figures for preceding year.	26,533	1,212	24,013	24,203	822	7,391	32,416	23,051	420	6,017	29,488
Northern Division, Suburban Court.	3,771	438	5,490	3,310	318	2,610	6,238	3,250	231	2,060	5,541
Southern Division, Suburban Court.	2,885	120	688	2,430	73	447	2,950	2,344	31	200	2,584
Court of Session	...	...	...	...	...	...	...	5,012	252	2,268	7,532
Total	6,656	558	6,178	5,740	391	3,057	9,185	5,594	282	2,268	7,144
Figures for preceding year.	7,620	670	6,777	6,645	390	3,584	10,628	6,407	277	2,029	9,373

The total number of cases tried in the town and suburbs during the year was 42,600, of which 38,202, or 89·67 per cent., ended in convictions. Of these the police sent up 29,390 cognizable cases and obtained convictions in 28,443, or 96·77 per cent. The Magistrates took up direct 2,138 cases and convicted in 798 or 37·32 per cent. Of 36,814 non-cognizable cases instituted in the town, only 8,810 were actually tried. The bulk of the cases which did not come on for trial were, no doubt, those under the Municipal Act, for omission to take out licenses, of which the Chief Presidency Magistrate explains that a very large number was struck off because service of processes could not be effected, while many more were dismissed owing to the licenses being subsequently taken out.

4. The cases declared false in the town and suburbs during the year were 152 in number, the percentage of false to true cases being ·19. Out of 111 false cases in the town, prosecutions under the Penal Code were instituted in 15. In 10 of these convictions were obtained, and fines were imposed, aggregating Rs. 77, in 4 cases the accused were discharged, and 1 case was withdrawn. Out of 41 false cases in the suburbs prosecutions were instituted in 8, in 7 of which convictions were obtained, fines aggregating Rs. 100 being imposed in 5 cases and the accused in the remaining 2 being sentenced to two and three months' imprisonment respectively. It is not shown whether any use was made of the provisions of sections 250 and 553, Criminal Procedure Code, in the Courts of the Stipendiary Magistrates. Information on this subject should be given in future reports. The number of prosecutions for false charges is again small, and the punishments awarded in the cases tried appear to be generally quite inadequate for so serious an offence.

5. *Property stolen and recovered.*—The value of property stolen in the town and suburbs was Rs. 2,76,460 against Rs. 3,06,963 in 1897, and the recoveries amounted to Rs. 1,82,350 against Rs. 1,72,629, the percentage on the property stolen being 65·95 against 56·23.

6. *Cognizable offences in the Town.*—The total number of cognizable offences in the town was 25,796 against 26,592 in the preceding year. A decrease occurred in offences, both serious and minor, against the person and property under the Indian Penal Code, and also in offences under special and local laws. There were 10 cases relating to coinage and forgery of currency notes against 7 in 1897, two important convictions being obtained in respect of forged notes. Two riots were committed in connection with plague measures, in both of which convictions were obtained. In 2 cases of murder capital sentence was passed: in 1 the accused is still at large, and in the fourth the murderer was found to be insane. There was one case of murder by robbers, in which no clue could be obtained. Cases of grievous hurt decreased from 47 to 39, and cases of kidnapping also showed a reduction from 6 to 1. The number of robberies was 3—the same as in 1897. Burglaries were fewer than in the preceding four years, being 124 against 152 in 1897, 185 in 1896, 134 in 1895 and 141 in 1894. Detection followed in 73 cases, and 77 persons were convicted. Thefts also show a large decrease, the total being 1,060 against 1,700 in 1897. Of these, 857 cases were detected, 855 persons being convicted. There was a further decrease in the number of cases of criminal breach of trust, the total for the year being 153 against 187 in 1897 and 476 in 1896. Many cases of a civil nature appear to have been formerly brought before the Magistrates. Action was taken against vagrants and bad characters under Chapter VIII, Criminal Procedure Code, in 242 cases against 80 in 1897, and 235 persons were required to furnish security for good behaviour against 85. The increase shows greater energy on the part of the police in a direction in which it was needed. The larger number of cases and of persons bound down possibly accounts in part for the decrease in burglaries and thefts. Offences against the Police and other Acts numbered 12,312 against 10,717 in 1897, and there were 108 prosecutions under the Shipping Act against 70 in 1897. The cases under the Port Act were 784 in number, being approximately the same as in the preceding year. Prosecutions for cruelty to animals showed a decrease from 7,323 in 1897 to 6,636 in the year under review.

7. *Non-cognizable crime in the Town.*—Three important cases of forgery were successfully prosecuted during the year. In one of them an attempt was made fraudulently to obtain possession of a large sum of money lying to the credit of a suit pending before the High Court. Several of these cases are under enquiry, and it appears that a number of persons have been engaged for some time in putting forward false claimants for money in deposit in the High Court. The number of cases under the Calcutta Municipal Act was nearly double that in the preceding year, as already shown. Bogus firms carrying on fraudulent business, details of which have been given in previous reports continue to decrease, the number at the end of the year being 42 against 57 at the end of 1897.

8. *Cognizable crime in the Suburbs.*—There was a decrease in cognizable offences in the suburbs from 7,301 in 1897 to 6,419 in 1898. It was common to all classes of crime, except class 1 (offences against the State, public tranquillity, safety, and justice). There were 7 cases of counterfeiting coin against 6 in the previous year. A serious riot occurred, in which two medical officers on plague duty were attacked by a mob. On their being followed into the second storey of a house where they had been given shelter by the owner, one of the officers fired and wounded two men, both of whom died subsequently. Seven of the rioters were convicted and sentenced to various terms of imprisonment. There were 3 murders against 4 and 29 cases of grievous hurt against 34 in 1897. Cases of hurt by a dangerous weapon fell from 38 in 1897 to 21 in the year under review. A dacoity occurred in the outlying Tollyganj section. Arrests were made, but no conviction was obtained. Burglaries and thefts showed a decrease from 127 and 631 cases respectively in 1897 to 71 and 330 cases in 1898. In the suburbs, as in the town, proceedings were taken against a larger number of vagrants and bad characters, under the preventive sections of the Criminal Procedure Code. Forty-one persons were sent up, and order to furnish security for good behaviour was passed against 26, 3 being still under trial at the end of the year.

9. *Non-cognizable crime.*—The total number of non-cognizable cases was 6,178 against 6,777 in the previous year. There was a decrease in the number of municipal cases from 5,270 in 1897 to 4,439 in 1898.

10. *Suicides and accidental deaths.*—There were 89 suicides during the year against 101 in 1897. The number of accidental deaths was 329 against 331 in 1897. The Police appear to have exercised greater vigilance in checking rash driving, 130 drivers having been prosecuted for this offence against 100 in 1897. The number of fatal accidents in the Port of Calcutta was 87, of which 73 were by drowning.

11. *Working of the Arms Act.*—At the beginning of the year 3,249 fire-arms were in the hands of licensed dealers. The number imported was 3,715, and 1,319 weapons were purchased in the country. In all 5,309 weapons were sold against 5,568 in 1897. The balance in hand at the end of the year consisted of 3,610 pieces. Importations of guns and rifles were smaller than in the previous year. The figures show that revolvers and pistols are imported in steadily increasing numbers year by year. Twelve prosecutions were instituted under the Arms Act during the year. The most important case was a prosecution of an officer of a German steamer for importing a number of revolvers and offering them for sale without a license.

12. *European Vagrancy Act.*—At the close of 1897 there were 17 European vagrants in the Work-house, and 48 were admitted during the year. Twenty-seven were released on obtaining employment. Altogether 11 persons were deported, after entering into agreements under the Vagrancy Act. Twenty-two seamen had resort to the Alms-house, and passages were arranged for them by the Superintendent.

13. *Fire-Brigade Act.*—The Brigade was employed at 40 fires during the year, 13 in the town and on the river, 13 in the suburbs, and 14 in Howrah. The number of fires attended in 1897 was 32. The manual engines at out-stations rendered assistance in 10 fires. Eighty-nine other fires occurred in which the loss was trifling, being under Rs. 7 in each case. The estimated loss of property by fire during the year was Rs. 4,92,220 against Rs. 2,43,760 in 1897.

14. *Strength and discipline of the Police Force.*—The sanctioned strength of the Force at the end of the year was 3,004 against 3,007 on the last day of 1897. This number includes police permanently supplied to the Port Commissioners and other public bodies and private individuals. Sixteen members of the force were punished judicially during the year against 5 in 1897. Fifty-nine men were dismissed against 60 in 1897. The total of minor punishments was 501. There were 20 desertions against 6 in the preceding year. Proposals were submitted to the Government of India during the year for sanction to a considerable increase to the strength of the Force, and final orders are awaited. The necessity for a body of armed police was again felt in the past year, during the excitement which arose on the occurrence of plague and the adoption of precautionary and preventive measures. A large force of Military and Reserve Police was brought down from the districts, and their presence in the city proved of great value to the Commissioner of Police in preserving order.

15. *Old offenders and Anthropometry.*—The police kept surveillance over 744 released offenders. Out of 1,093 persons convicted of offences against property, and whose antecedents were unknown to the police, previous convictions were proved against 164—by means of anthropometry in the case of 27, and by finger-prints in the other cases. Previous convictions were proved against 480 offenders in all, against 517 in the previous year.

16. *Judicial Work.*—Mr. Pearson was on leave from the beginning of the year until the 2nd April, from which date until the end of the year he held the office of Chief Presidency Magistrate. Mr. Bonnaud officiated during his absence. The Hon'ble Nawab Bahadur Syed Amir Hussein, C.I.E., was Magistrate of the Northern Division during the year, except from the 14th October to the 28th November 1898, when Mr. Bonnaud acted.

17. *Court of the Chief Presidency Magistrate.*—The total number of cases instituted during the year and pending from the previous year was 10,930 against 11,986 in the previous year. A total of 11,963 persons was concerned in these cases, of whom 10,659 were convicted and 1,292 discharged.



Appeals were preferred against the order of the Court in 27 cases. In 21 cases the appeals were summarily rejected and in 6 they were dismissed. Motions were made to the High Court in 8 cases, of which 1 only was successful.

18. *Court of the Northern Division Magistrate.*—The total number of cases instituted was 16,812 against 16,966 in the year preceding. Of 18,749 persons appearing before the Court, 17,989 were convicted and 696 were acquitted or discharged. Appeals were preferred in 42 cases, and the order of the Lower Court was upheld in all except 1, which was remanded for re-trial. Motions were made to the High Court in 22 cases, and of these 1 was partially successful, the case being remanded for further evidence.

19. The following statement compares the number of persons against whom process issued in non-cognizable cases, with the numbers actually appearing before the Court in each of the past two years:—

NAME OF COURT.	Number of persons against whom process issued.		Number of persons actually appearing.		Percentage of persons appearing to persons against whom process issued.		REMARKS.
	1897.	1898.	1897.	1898.	1897. %	1898.	
1	2	3	4	5	6	7	8
Chief Presidency Magistrate	2,837	2,321	857	896	30.2	38.2	
Presidency Magistrate, Northern Division.	4,904	3,636	1,351	1,158	27.5	31.8	
Honorary Presidency Magistrates	19,890	32,637	12,174	17,320	61.2	53	
Total	27,631	38,594	14,382	19,374	52	50.2	

20. *Work of Honorary Magistrates.*—A total of 2,070 cases was transferred for trial to the Bench of Honorary Magistrates against 2,493 in the previous year, and 2,599 cases to Honorary Magistrates sitting singly as compared with 2,944 in 1897. Of the 4,669 cases thus transferred, 3,264 were from the Southern and 1,405 from the Northern Division. Of 6,475 persons who appeared before the Courts in these cases, 4,659 were convicted and 1,788 acquitted or discharged. Appeals were preferred in 14 of the cases, but the conviction was upheld in all. The High Court was moved in 6 cases, in 2 of which the order was set aside. The number of Municipal cases which came before the Honorary Magistrates was 32,702. Of these, 16,890 were struck off, and of the 15,812 cases which came on for trial, 10,271 resulted in acquittal or discharge and 5,227 in conviction. The amount of fines imposed in Municipal cases was Rs. 30,989-14 against Rs. 23,280-14 in the previous year. Out of this amount a sum of Rs. 22,257-8 was realised. Practically the whole of the cases instituted by the Corporation under Act II (B.C.) of 1888 is disposed of by the Honorary Magistrates. The very large number of cases struck off indicates much waste of labour in issuing processes, which could have been avoided if the Municipal establishment had been more energetic in compelling the taking out of licenses. An extra clerical staff had to be employed. Since the commencement of the present year three additional clerks have been sanctioned for the Bench for one year. If it be found necessary to retain this establishment permanently, the matter should be separately submitted for the orders of Government. The Lieutenant-Governor desires to thank the Honorary Magistrates who have assisted in disposing of the large amount of work done by the Bench, and especially those whom Mr. Pearson mentions as having frequently attended out of their regular turn to take the place of absentees.

21. Since the close of the year the Government has received representations from public bodies urging the necessity for the appointment of a third Stipendiary Magistrate. The matter will be settled on the Lieutenant-Governor's return to Calcutta.

22. The efficiency of the Calcutta Police Administration has been maintained under Mr. James' control and he again acknowledges the assistance rendered by the various public bodies in the matter of the improvement of the police.

ORDER.—Ordered that a copy of this Resolution be forwarded to the Commissioner of Police, Calcutta, for information and for communication to the Presidency Magistrates.

Ordered that a copy of the Resolution be forwarded to the Commissioner of the Presidency Division; the Chairman of the Corporation of Calcutta, and the Municipal Department of this Government, for information.

Ordered also that a copy of the Resolution be published in the *Calcutta Gazette*.

By order of the Lieutenant-Governor of Bengal,

C. W. BOLTON,

*Chief Secretary to the Govt. of Bengal.*

## RESOLUTION ON INLAND EMIGRATION REPORT FOR 1898.

## GENERAL DEPARTMENT.—EMIGRATION.

*Calcutta, the 20th July 1899.*

RESOLUTION—No. 2135.

## READ—

The Report of the Superintendent of Emigration, Calcutta, on Inland Emigration for the year 1898.

DR. C. BANKS held the appointment of Superintendent of Emigration throughout the year.

2. In accordance with the orders of Government contained in paragraph 3 of the Resolution on the Inland Emigration Report for 1897, the Superintendent of Emigration has in section I of his Report summarized the more important questions connected with Inland Emigration which engaged the attention of Government during the year. These were—

- (1) the precautionary measures adopted by Government to protect the tea industry from the spread of the plague;
- (2) the arrangements for the segregation of emigrants infected with cholera, small-pox, and other contagious diseases at Sara, Naihati, and the various halting places along the emigration routes to the labour districts in Assam;
- (3) the revision of the rules issued under the Assam Labour and Emigration Act, I of 1882, and the Inland Emigrants' Health Act, I (B.C.) of 1889, in order to improve the transit of emigrants to Assam, Sylhet and Cachar; and
- (4) the opening of an alternative route for emigrants proceeding to Cachar and Sylhet *via* Chandpur.

The arrangements under items (2) and (3) in the above list are now being carried out, the orders of the Government of India as to the establishments proposed for the various halting places having been recently received.

Besides these administrative measures, the amendment of the Assam Labour and Emigration Act, I of 1882, with the object of removing abuses in connection with the recruitment and despatch of coolies to Assam, was under consideration, and since the close of the year the opinion of this Government on the subject has been submitted to the Government of India.

3. *Contractors' emigrants.*—There were three licensed contractors with depôts in the suburbs of Calcutta during 1898, of whom one closed his business on the 9th July 1898. They had 14 recruiters working under them as against 15 in the preceding year, and they registered 2,867 coolies as against 5,227 in 1897. This large decrease of 2,360 in the number of emigrants recruited on behalf of licensed contractors during the year was no doubt due to the greater prosperity of the agricultural population and the abundance and cheapness of food-supplies. Of the 2,867 coolies, all but 30 were registered in the 24-Parganas, which corroborates the conclusion drawn in last year's Resolution that contractors depend largely on the numerous free emigration depôts in Calcutta for their supply of labour. Of the coolies registered, 45 per cent. were natives of Bengal; 1·5 came from Bihar; nearly 5 per cent. were natives of Orissa; hardly any came from the North-Western Provinces and Oudh; 21 per cent. were natives of the Central Provinces; 7 per cent. of Central India; and 19 per cent. were natives of Madras. These details are based on the statements of the emigrants themselves, and cannot be regarded as absolutely correct. Out of the 2,867 emigrants, 5 were discharged and 6 deserted from sub-depôts, reducing the total number to 2,856. To this number must be added 99 coolies who were already in the depôts on the first day of the year, and one infant born in a depôt, raising the total number of persons accommodated in the depôts to 2,956. Of these, 41 were discharged, 78 deserted, 3 died, 1 was rejected, 52 remained over in the depôts at the close of the year, and 9 were unaccounted for. These last belonged to the depôt which was closed during the year. The percentage of sickness during 1898 amounted to 0·27 as against 1·82 in the previous year, and the death-rate per mille was 1·01 as against 6·87. These figures show that the health

of the emigrants was good, and no case of cholera, small-pox, chicken-pox or measles occurred during the year. The percentage of contracts for four years on the total number of contracts registered rose to 90.9 as against 81.4 in the previous year. The emigrants despatched to Goalundo numbered 2,817, including 49 despatched from Calcutta on the 31st December 1897. Of these, 1,957 emigrants were landed in Assam, and 839 went to Cachar and Sylhet.

4. *Special Local Agents.*—During the year under report 11 special local agents were licensed as against 8 in the previous year. Their recruiting operations, which were confined to the districts of Manbhum, Ranchi, the Sonthal Parganas, and Singhbhum, resulted in the enlistment of 7,447 emigrants as against 15,471 in 1897. This considerable falling off in the number registered, notwithstanding the employment of a larger number of special local agents, must also be attributed to the return of prosperity locally. The proportion of labourers to dependents was approximately 3 to 1. Of the entire number, Manbhum contributed nearly 73 per cent., Ranchi 26.5 per cent., and the Sonthal Parganas 0.5 per cent. Of the total number of emigrants, 7,261 were registered for Assam, 81 for Cachar and 105 for Sylhet. Of these, 5,386 were despatched to Goalundo, where they arrived without casualty, while at Goalundo there were 34 releases and 7 desertions, the number of emigrants being thus reduced to 5,345, of whom 5,207 were embarked for Assam, 80 for Cachar and 58 for Sylhet. Of the number despatched to Assam, 15 deserted and 9 died, 8 of the deaths being due to cholera, the percentage of the total number of casualties amounting to 0.46 and of deaths to 0.17 as against 0.84 and 0.69, respectively, in the previous year. No casualties occurred among the emigrants embarked for Cachar and Sylhet. One hundred and eighteen emigrants left for Assam *via* Dhubri, and duly arrived at their destination.

5. *Certificated garden sardars.*—There were 4,306 certificated garden sardars and 31 sardarnis as against 4,439 sardars and 65 sardarnis in 1897. The marginal table gives the number for each of the last five years, and shows that the number of sardars and sardarnis has been gradually on the decrease since 1895. No licenses of

YEAR.	Number of—		Local agents.
	Sardars.	Sardarnis.	
1894	5,274	158	138
1895	5,317	164	172
1896	4,748	73	164
1897	4,439	65	119
1898	4,306	31	144

local agents were cancelled or certificates of garden sardars withdrawn during the year. The number of coolies registered by garden sardars and sardarnis amounted to 13,624 and 71, respectively, as against 18,775 and 184 in the previous year—a decrease, for which the prosperity of the agricultural population and the abundance and cheapness of food-grains is again responsible. Of the 13,695 emigrants, 12,522 were registered for Assam, 361 for Cachar, and 812 for Sylhet. The total number of emigrants who left the districts of recruitment during the year for embarkation at Goalundo was 19,280, of whom 10 were released, 2 deserted, and 2 died at Goalundo. Of the remaining 19,266, 17,052 were embarked for Assam, 875 for Cachar, and 1,339 for Sylhet. Out of the 918 sardari emigrants who were despatched to Assam *via* Dhubri, 4 died of cholera at that place, and the remaining 914 were landed at their destination as there was no casualty on the passage by steamer.

6. *Free emigrants.*—The figures as to free emigration, which are only approximately accurate, are derived from information received from the Emigration Agents at Goalundo and Dhubri as to the number passing through these stations. Their reports show that 21,054 free emigrants left the recruiting districts for Goalundo, and 1,463 for Dhubri, giving a total of 22,517 as against 54,934 in 1897. Of the coolies who travelled *via* Goalundo, 3 deserted, 2 died, and 31 were released at that place, the total casualties thus amounting to 36. Of the remaining 21,018 emigrants, 8,314 were bound for Assam, among whom 2 desertions and 8 deaths subsequently occurred, but no casualty of any description occurred *en route* among the 4,465 and 8,239 free emigrants who embarked for Cachar and Sylhet, respectively. Out of the 1,463 free emigrants who were despatched to Dhubri, 1,431 eventually arrived, the casualties numbering 32 as against 187 in the previous year. In addition to this number, 6,950 free emigrants who embarked at Goalundo were landed at Dhubri for the purpose of executing contracts, bringing the actual number of arrivals at Dhubri to 8,381. This number was increased

by the 5 emigrants that remained at Dhubri at the close of the previous year to 8,386. Among these there were 218 casualties, viz., 208 released, 6 desertions, and 4 deaths. Eventually 8,155 were re-embarked and 13 left behind at Dhubri. Of the number embarked, 7,952 executed labour contracts, and 203 proceeded as free emigrants.

7. *Execution of contracts.*—The following statement gives the figures connected with the execution of contracts under the Assam Labour and Emigration Act I of 1882:—

PLACE.	THREE YEARS.				FOUR YEARS.				GRAND TOTAL.
	Contractors' coolies.	Special local agents' coolies.	Garden sardars' coolies.	Total.	Contractors' coolies.	Special local Agents' coolies.	Garden sardars' coolies.	Total.	
1	2	3	4	5	6	7	8	9	10
Assam	.....	.....	225	225	1,574	5,883	6,889	12,445	12,670
Cachar	.....	13	167	180	384	40	50	474	634
Sylhet	202	14	312	528	63	43	158	263	790
Total for { 1896	202	27	684	913	2,020	5,964	6,797	14,181	14,694
1897	604	643	8,406	9,653	3,041	9,645	1,364	14,040	23,873

Fifteen thousand and ninety-four contracts were executed during 1898, of which 6 per cent. were for three years, and 94 per cent. for four years. In 1897 the number of contracts executed was 23,873, of which 41 per cent. were for three years, and 59 for four years.

8. *Offences connected with emigration and inspection of depôts.*—The quarterly returns of offences connected with emigration submitted by district officers and their annual reports of inspection of cooly depôts are dealt with separately, and need not be noticed here.

9. *Summary.*—The following table summarizes the statistics of emigrants registered to proceed during the year from the recruiting districts to the labour districts in Assam *via* Calcutta, Goalundo, and Dhubri:—

	1897.				1898.			
	<i>Via</i> Calcutta.	<i>Via</i> Goalundo.	<i>Via</i> Dhubri.	Total.	<i>Via</i> Calcutta.	<i>Via</i> Goalundo.	<i>Via</i> Dhubri.	Total.
1	2	3	4	5	6	7	8	9
Number registered through licensed contractors.	5,237	.....	.....	5,237	2,863	.....	4	2,867
Number registered through special local agents.	.....	11,861	3,600	15,471	.....	5,511	1,006	7,467
Number registered through certificated garden sardars.	.....	15,510	3,410	18,959	.....	2,462	5,313	13,006
Free emigrants	.....	46,940*	7,984	54,924	.....	21,054*	1,463	22,517
Total	5,237	74,940	15,024	94,591	2,863	26,047	8,616	46,526

\* These figures include the free emigrants who were landed at Dhubri for execution of contracts.

Taking all classes of emigrants together, the results of the year's operations show that during 1898 there was a decrease of 48,065 in the number of coolies embarked for the labour districts in Assam, an obvious consequence of the abundant harvests and improved comfort of the later year.

10. *Transport.*—Emigrants were conveyed from Goalundo to the labour districts by steamers, and these vessels were inspected at certain places *en route* by officers specially appointed for the work. The average length of the river journey to Assam was during 1898 from six to eight days, and to Cachar and Sylhet from one to six days. Of the 3,934 batch way-bills of emigrants proceeding *via* Goalundo, issued in 1898, 3,443, or 87 per cent., were eventually returned to the Superintendent of Emigration. In 1897 out of a total of 4,199 batch way-bills issued, 3,634, or 86 per cent., were returned to that officer. In regard to the despatches from Dhubri, out of a total of 261 batch way-bills issued, 209, or 80 per cent., were returned in 1898 as against 817, or 77 per cent., in the preceding year.

11. *Casualties.*—As compared with the decrease in the number of emigrants despatched to the labour districts, there has been more than a corresponding



decrease in the total number of casualties, the total of which fell from 2,507, or 2·53 per cent., in 1897 to 609, or 1·19, during the year under report. Deaths from cholera amounted to 0·11 per cent. as against 0·99 per cent. in the preceding year, while the mortality from other causes fell from 0·12 per cent. during 1897 to 0·03 per cent. in 1898. The number of casualties among free emigrants also decreased from 2·53 per cent. in 1897 to 1·43 per cent. during 1898. There has been also a considerable decrease in the number of deaths among this class of emigrants, which was only 24, or 0·1 per cent., during 1898, as against 541, or 0·98 per cent., during 1897.

12. The thanks of Government are due to Dr. Banks for the active and careful discharge of his duties as Superintendent of Emigration. There was a marked improvement in all the circumstances and arrangements relating to coolie emigration to Assam.

By order of the Lieutenant-Governor of Bengal,

F. A. SLACK,

*Offg. Secy. to the Govt. of Bengal.*

# RESOLUTION ON THE REPORT ON THE LEGAL AFFAIRS OF THE GOVERNMENT OF BENGAL FOR THE YEAR 1898-99.

No. 37J.R.T.

## RESOLUTION.

JUDICIAL.

*Dated Yacht Rhodas, the 20th July 1899.*

## READ—

The Report on the Legal Affairs of the Government of Bengal for the year 1898-99.

## Read also—

The Reports of the two previous years, and the orders of Government recorded thereon.

The report is submitted by Mr. Pratt, who was Legal Remembrancer at the close of the year. There were several changes in the appointment during the year, due to the temporary promotion to the High Court of Mr. Wilkins, the substantive incumbent, and Messrs. Pratt and Gupta, officiating incumbents.

2. Only one appeal in which the Government is interested was pending before the Privy Council. It relates to a claim to lands against the Syedpore Trust Estate, which is managed by the Collector of Khulna. The appeal is against a decision of the High Court, on appeal, rejecting the claim.

3. The table below compares the results of Government litigation in all the Civil Courts of Bengal during 1898-99 with those of the two preceding years:—

	ORIGINAL SUITS.			APPEALS—			APPEALS—			Total.			REMARKS.
				Before Lower Courts.			Before High Court.						
	1896-97.	1897-98.	1898-99.	1896-97.	1897-98.	1898-99.	1896-97.	1897-98.	1898-99.	1896-97.	1897-98.	1898-99.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Decided in favour of Government.	118	163	142(a)	35	51	30(b)	14	33	26(e)	107	227	198	(a) 17 cases were governed by 8 judgments.
2. Decided against Government.	54	36	75(e)	7	10	16(d)	6	3	5	67	40	96	(b) 3 appeals by 3 judgments.
3. Compromised, remanded or withdrawn.	24	29	48	2	1	6	2	4	33	28	34	87	(c) 23 cases by 7 judgments.
4. Percentage in favour of Government.	72.8	83.1	71.5	83.3	91.1	69.2	73.6	91.6	78.2	74.5	82.2	71.7	(d) 7 appeals by 3 judgments. (e) 3 appeals by 1 judgment.

Excluding cases under the Land Acquisition Act, the figures are as follow:—

	ORIGINAL SUITS.			APPEALS—			APPEALS—			Total.			REMARKS.
				Before Lower Courts.			Before High Court.						
	1896-97.	1897-98.	1898-99.	1896-97.	1897-98.	1898-99.	1896-97.	1897-98.	1898-99.	1896-97.	1897-98.	1898-99.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Decided in favour of Government.	103	121	88	35	51	30(b)	14	21	12	134	193	180	(a) 20 cases were governed by 3 judgments.
2. Decided against Government.	37	28	40(a)	7	10	16(c)	5	3	4	46	33	60	(b) 5 appeals by 3 judgments.
3. Compromised, remanded or withdrawn.	19	27	31	2	1	6	2	3	33	23	31	70	(c) 7 appeals by 3 judgments.
4. Percentage in favour of Government.	79.3	82.3	73.3	83.3	91.1	69.2	73.6	91.3	76	77.4	82.5	73.3	

There was an increase under all heads of litigation except that of appeals in the Lower Courts, the total of all cases being 381, against 310 and 262 respectively in the two preceding years. Excluding suits compromised, remanded or withdrawn, the percentage of successful cases was lower than in either of the two preceding years, being 71·7 against 82·2 and 74·5 in 1897 and 1898 respectively.

4. Out of 64 appeals before the High Court, 33 are shown as having been compromised, remanded or withdrawn. It would be convenient if in future years the cases remanded are shown separately from those compromised or withdrawn. Five cases were decided against Government and of each of these the Legal Remembrancer gives a brief account. In three the Government was defendant-respondent, and in two defendant-appellant. In the Lower Appellate Courts the percentage of successful cases was 69·2, twelve cases being decided against Government. In five of these a second appeal has been preferred to the High Court. In the Courts of first instance there were 265 cases, out of which 48 were compromised or withdrawn, while of the remainder 71·5 were decided in favour of Government, two or more cases governed by one judgment being counted as one. No special interest appears to attach to any of the litigation in which the Government was concerned during the year, and no irregularities on the part of officers giving rise to litigation are brought to notice.

5. The following statement shows the result of Court of Wards' litigation during the last three years :—

	1896-97.	1897-98.	1898-99.
Decided in favour of the Court of Wards	...	2,206	3,041
Ditto against the Court of Wards	...	162	183
Compromised, remanded or withdrawn	...	159	249
Percentage decided in favour of the Court of Wards	93·1	94·3	86·8

The percentage of successful appeals before the High Court was 85·7, against 60 in the previous year and 75 in 1896-97. This result is satisfactory. That in the Lower Appellate Courts was less so, only 56·6 per cent. of the cases having been successful, against 76·5 in the preceding year. In the Courts of first instance the number of cases was large, 2,625 suits having been instituted. Of these, excluding cases compromised or withdrawn, 95·3 per cent. were successful.

6. The following table shows the amounts realised under decrees in favour of Government during the year 1898-99 compared with the two preceding years :—

	1896-97.	1897-98.	1898-99.
Brought forward from last year	...	...	...
Decreed during the year	...	...	...
Total amount due	...	...	...
Amount realised	...	...	...
Percentage of amount recovered to total amount due	...	...	...

The percentage of realisations was practically the same as in the preceding-year. The heaviest outstanding balances were in the districts of the 24-Parganas, Ranchi, Midnapore, Tippera, Darbhanga, Gaya, Faridpur, Chittagong and Backergunge. The explanations given of the short realisations show that in Midnapore, Gaya, Faridpur and Chittagong the success attained in realising amounts which were recoverable during the year was very small. A sum of Rs. 450-5-6 was distributed in rewards to officers in three districts whose special exertions led to the recovery of sums aggregating Rs. 3,800-6-9, which could not be realised in the ordinary way.

7. In Court of Wards' cases the realisations under decrees were worse than in either of the two preceding years, being only 26·3 per cent. against 30·2 and 28·8. The attention of the Commissioners concerned will be drawn to the failure of the District Officers to submit returns for the estates mentioned in paragraph 72 of the Report.

8. The revised Civil Suit Rules, the issue of which has been delayed owing to the necessity of making certain references to the Accountant-General on matters of account, will shortly be published.

9. The Lieutenant-Governor regrets to observe that in almost every section of the work of the Legal Remembrancer's office there has been a distinct decline during the past year.

ORDER.—Ordered that a copy of this Resolution be forwarded to the Superintendent and Remembrancer of Legal Affairs and to the Solicitor to Government for information.

Ordered also that a copy of this Resolution be forwarded to the Board of Revenue and to the Revenue Department of this Government for information.

Ordered also that a copy of the Report and of the Resolution be submitted to the Government of India in the Home Department for information.

Ordered also that a copy of the Resolution be published in the *Calcutta Gazette*.

By order of the Lieutenant-Governor of Bengal,

C. W. BOLTON,

*Chief Secretary to the Govt. of Bengal.*

RESOLUTION ON THE FINAL REPORT OF THE SETTLEMENT OF  
THE PALAMAU GOVERNMENT ESTATE.

REVENUE DEPARTMENT—LAND REVENUE.

*Calcutta, the 20th July 1899.*

RESOLUTION—No. 2423.

READ—

The Final Report on the settlement of the Palamau Government Estate in the district of Palamau.

Read also—

Letters No. 288A, dated the 30th March 1899, from the Board of Revenue, No. 329S., dated the 21st February 1899, from the Director of Land Records, and No. 736L.R., dated the 16th November 1898, from the Commissioner of the Chota Nagpur Division, reviewing the Settlement Officer's Final Report.

Letter No. 569A., dated the 15th June 1899, from the Board of Revenue, on the subject of the grant of pattas to the raiyats.

THE new settlement of the Palamau Government estate began to take effect from September 1896, but the report of the Settlement Officer, which bears date the 24th October 1897, reached Government on the 7th April 1899. It appears that the correction of the proofs was much delayed owing to the want of time on the part of the officer engaged on the work, so that the final copies were not issued until August 1898. Considerable delay also occurred in the submission of the remarks of the Divisional Commissioner. The Lieutenant-Governor, agreeing with the Board, is unable to regard the explanation offered as wholly satisfactory.

Notwithstanding certain inaccuracies noticed by the Commissioner of the Division, the Report with its appendices contains much interesting information relating to the physical features of the country, its agriculture, the habits and customs of the people, and other matters. But the accounts given in it of the traverse and cadastral survey, the preparation of the records, and the determination of the rates of rent, are meagre, and much too little has been said of the valuable work done by the Deputy Commissioner, Mr. W. R. Bright, who fully discussed every important question which came before Government in connection with the settlement, and by whom the proceedings were organised from the beginning, and practically the whole of the survey and record-writing and some part of the attestation supervised.

2. The Government estate, the settlement of which forms the subject of the present report, lies in pargana Palamau, part of the district of the same name. This tract, a hilly and wild region, was conquered from its Chero rulers in 1773 A.D. After several successive settlements made with the descendants of the old Rajas, the estate was purchased by Government in 1812 at an auction sale for arrears of revenue. In 1816 it was granted to the Raja of Deo, in the district of Gaya, as a reward for loyal services rendered, but was resumed in 1818 in consequence of oppression on the part of the Raj agents, a remission of Rs. 3,000 a year from the revenue of his Bihar estates being allowed to the Raja by way of compensation.

3. The native rulers of Palamau had alienated a large part of the pargana as jagirs and other tenures granted at quit-rents, subject to a right of re-entry



in default of heirs male. Government on acquiring the rights of the old Rajas did not resume these tenures. After a searching enquiry made in 1893-94, they have been recognised as estates, permanent, heritable, and transferable: and the right of Government to resume on failure of male heirs has been abandoned once for all. The villages not so given away, known as *khalsa* or personal villages, constitute the Government estate, which has been settled raiyatwari from time to time, with thikadars to collect the rents from the raiyats.

4. The last regular settlement was commenced in 1864 and completed in 1872. The total number of villages settled was 401 with a total area of 273,635·81 acres (or 427·55 square miles), out of which 30 villages were subsequently included in the Palamau Reserved Forests, while 12 were added to the roll by resumption or jungle-clearing. The terms of settlement of the several villages were so fixed as to expire simultaneously on the 31st March 1894; but, when the resettlement operations were in progress the existing settlement was extended to the 31st March 1896 in order to admit of the completion of the proceedings.

5. Proposals for a resettlement of the estate were submitted to Government in September 1892, but the survey was not commenced until July 1893. The traverse survey was practically completed in the survey year 1893-94. Cadastral survey was commenced in November 1893, but, owing in great part to the slowness of the local *Kol* amins, was protracted till the end of the survey year 1894-95. In August 1895 Government decided that, in order to set back encroachments made by jagirdars or other tenure-holders and to protect the Government estate from further encroachments, the external boundaries of all the *khalsa* villages should be surveyed and demarcated in accordance with the revenue survey of 1860, except where this had already been done in the course of the survey of the cultivated blocks. This work was commenced on the 10th November 1895 and completed on the 12th June 1896. The initial record-writing was done by the survey amins under the supervision of Babu Rameshwar Prashad; and this officer also did some amount of attestation under the guidance of the Deputy Commissioner, Mr. Bright, who had drawn up detailed rules for both *khanapuri* (initial record-writing) and attestation. The Settlement Officer, Mr. D. H. E. Sunder, joined on the 17th November 1894. The attestation work was completed in the survey year 1894-95, except for one village, which was dealt with in the following year. Assessments were completed and announced to the raiyats by the end of April 1896. *Jamabandis* or rent-rolls were published in August 1896 in accordance with the provisions of Act VIII (B.C.) of 1879, and extracts showing the details of the lands in each holding and the rent payable were distributed to the raiyats. The submission of the final report was delayed till October 1897, in consequence mainly of the deputation of the Settlement Officer to famine-relief.

By a notification of the 17th July 1894, all waste lands the property of Government in the *khalsa* villages, with the exception of lands used by the villagers for cultivation or habitation, had been declared "Protected Forests." Accordingly the Settlement Officer was required to mark off, in consultation with the local Forest officers, the village areas in blocks of a convenient shape, adding to the cultivated lands such quantity of waste land as would be sufficient for the needs of the villagers. The blocks of waste land left out of these village areas, if of suitable size, were to form Protected Forests. It seems, however, that the Settlement Officer failed to grasp the intention of Government, and his final report contains no mention of what he did in this matter. After the close of the settlement operations, this work was entrusted to the Sub-Deputy Collector, Babu Rameswar Prashad, in charge of the Government Estate, who has completed it, and his report on the proceedings is being separately considered by Government.

6. The Palamau Government estate as now settled comprises 399 villages. The total area traversed, including jungle and waste, is 272,000 acres, or 425·22 square miles, of which 137,520 acres, or 203·93 square miles, from the occupied area, and have been cadastrally surveyed.

The aggregate area, cultivated and culturable, including homestead, held by tenants is 65,546 acres, of which 56,278·51 acres are reported to have been found actually under cultivation. The Settlement Officer calculates the increase in cultivation since the last settlement at 221 per cent., taking the total cultivated area at that time to have been 17,511·44 acres. The cultivated area shown in Table III appended to Mr. L. R. Forbes' Report of the last settlement is, however, 43,426·25 acres, and on this basis the increase in cultivation amounts to only 29·6 per cent. The discrepancy has been noticed by the Commissioner of the Division, and a copy of the explanation called for by him should be submitted to Government.

Of the total cultivated area 10,428·20 acres are double-cropped. Rice occupies 23·84 per cent. of the cropped area, while 54·39 per cent. is covered by other food-crops. The total irrigated area reported by the Settlement Officer is 8,558·58 acres. *Ahars*, or reservoirs made by throwing embankments across drainage hollows or across the natural slope of fields, constitute the principal source of irrigation. Mr. Sunder has recommended the construction or improvement of certain *ahars*. The matter is receiving the attention of the Board and the local officers, and the Lieutenant-Governor will be glad to have a report on the action taken to give effect to the Settlement Officer's recommendations.

7. A great part of the population of Palamau consists of aboriginal tribes who were not accustomed to the ordinary system of assessing each bigha of land at a certain rate of rent, known in Palamau as the *uttakar* system, which was, therefore, at the last settlement adopted only in the case of villages where cultivation was more permanent and the raiyats were of the more advanced castes. In the more jungly villages lying chiefly to the south, the system adopted was the *pariadari* system, which was the only one the aboriginal raiyats understood, and under which certain of the village lands, generally the lowlands fit for paddy, were divided into a number of *parias* or shares, each of which carried with it the right to cultivate a certain extent of *bhita* or upland free of rent. The *parias* were classified as first, second and third class, according to the soil contained in each, and a rent was fixed for the whole area according to the class in which the *paria* was placed.

For the new settlement it was at first decided that the *uttakar* system should be introduced wherever possible, it being left to the discretion of the Settlement Officer to continue the crude *pariadari* system where he failed to induce the raiyats to accept the other method. Subsequently, in the course of his proceedings, the Settlement Officer found that the general development of the country had been such that there was no need to settle the estate partly on the *uttakar* and partly on the *pariadari* system; and in accordance with a recommendation made in his Rate Report, Government decided that throughout the estate the settlement should be made on the *uttakar* system.

8. After considerable discussion it was finally decided that for purposes of assessment the two broad divisions of cultivated land, *dhankhet* and *bhita*, should each be divided into three classes. First-class *dhankhet* is the lowest land on which most water remains, and which is therefore best suited to winter rice; the other two classes possess the same character but in lower degrees. First-class *bhita* is the land on which *bhadoi* or autumn paddy, wheat, barley, maize and sugar-cane are grown; lands yielding *marua* (*eleusine corocana*), linseed and gram have been classed as second-class *bhita*, and those producing til or jinjilli (*sesamum indicum*), cotton and pulses have been classed as third-class *bhita*. This classification is the same as that current in the adjoining districts of Hazaribagh and Lohardaga; but the Settlement Officer observes that while it appears to be understood by the more intelligent raiyats of the higher castes, the bulk of the people cannot grasp the distinction between the several classes.

Whilst the above classification of soils was retained unaltered from the last settlement, the similar triple division of villages was abandoned, and in its place a more complicated division, based on a variety of factors, was introduced.

In fixing the rates, Government was influenced by the consideration that Palamau is still in a backward condition, partly owing to the absence of railways, and the vicissitudes of the rainfall. Therefore it was decided for the most part to keep to the rates of the previous settlement, and in some cases those rates were even reduced.

9. The following table shows the class of tenants, the areas held by them and the rents assessed :—

CLASS OF TENANTS.	Number of tenants.	Aggregate cultivated and culturable area held by each class.	Average area of cultivated and culturable lands per holding.	RENT—		Average rent per acre as now settled.	REMARKS.
				Actually paid by tenants as found at attestation.	According to settlement.		
1	2	3	4	5	6	7	8
Settled raiyats	Resident ...	3,875	27,675-84	7-23	23,914 6 11	31,702 11 0	1 2 3
	Non-resident ...	1,134	11,703-90	9-80	10,988 6 5	15,245 0 0	1 4 10
Occupancy raiyats.	Resident ...	1,862	6,016-14	3-21	6,228 6 2	8,104 10 0	1 5 6
	Non-resident ...	605	2,604-26	4-20	2,754 11 9	3,815 9 0	1 7 5
Non-occupancy raiyats.	Resident ...	8,693	10,642-22	2-97	8,098 10 5	9,019 9 0	0 18 6
	Non-resident ...	1,883	6,373-49	3-38	5,708 8 5	6,545 3 0	1 0 6
Rent-free hold-ers.	A. Service tenures	222	385-15	1-73	.....	.....	.....
	B. Chaukidari and Goraiti ...	19	23-63	1-50	.....	.....	.....
	C. Others (Khairat, &c.) ...	51	116-40	2-28	.....	.....	.....
	Total ...	13,244	65,646-03	.....	57,693 2 1	74,432 10 0	.....
Shikmi or under-raiyats	...	2,519	2,977-24	1-18	5,966 14 6	Not settled.	.....

The classification of raiyats into settled, occupancy and non-occupancy raiyats has been made in accordance with the principles of the Tenancy Act, although that Act is not in force in the Chota Nagpur Division, and although occupancy rights are unknown in the *jagirdari* villages. The large percentage of non-occupancy raiyats shown above is due to the unstable disposition of the people. Besides the concession of occupancy rights, all the raiyats, whether rent-paying or not, have for the first time been given *mahua* trees free of rent at the rate of two trees per raiyat in the northern and four in the southern villages. The flower of these trees, dried and preserved, forms a valuable article of food for the lower classes. The resident raiyats have also been allowed to hold their homestead lands rent-free, the total area of land thus left unassessed being 991·51 acres, or an average of 0·19 acre per raiyat. Of the rent-free holdings, the service tenures, which are resumable, are held on the distinct understanding that they will be retained in their tenures only so long as the raiyats are satisfied with them. The Lieutenant-Governor agrees with the Commissioner and the Board in thinking that the lands comprised in the chaukidari tenures, amounting only to 29 acres, need not be resumed, and that the service tenures referred to in paragraph 97 of the final report need not be specially sanctioned since they are all resumable save those called *khairat*, which appear to be petty maintenance grants given by the former Chero Rajas to *jakirs*, Brahmans and others.

10. The total raiyati rental fixed at the last settlement was Rs. 40,843. This by various means the thikadars or farmers increased to Rs. 57,693, which was the rent actually paid as ascertained at attestation. The new rental being Rs. 74,433, the increase on the attested rental amounts to 29 per cent. The Lieutenant-Governor agrees with the Board in thinking that (paragraph 5, Board's report,) the incidence of the rent per acre, viz. Re. 1-2-3, is moderate. The increase in the rental is due chiefly to extension of cultivation and has been accepted by the tenants.

The cost incurred was as follows:—

			Total cost.	Cost per acre of the area cadastrally surveyed.	Cost per acre of the total area surveyed.
			Rs.	Rs. A. P.	Rs. A. P.
Survey	...	...	79,165	0 6 9	0 4 8
Settlement	...	...	40,387	0 3 5	0 2 4
Total			1,19,552	0 10 2	0 7 0

The actual expenditure incurred, and the time occupied were, however, more than double those originally contemplated, this being due to the fact that the original estimates were based on the assumption that only 110 square miles would have to be cadastrally surveyed, whereas in reality the area was 294 square miles.

11. To the rental of the estate should be added the revenue derived from the following species of trees:—

(1) *Mahua trees*.—Those in excess of the number allowed to the raiyats free of rent have been settled for the period of the settlement (15 years at 4 annas per tree in the northern villages and at 2 annas in the southern villages.

(2) *Asan trees*, used for rearing silk cocoons, sold by auction annually by the Deputy Commissioner either for the whole estate or for groups of villages.

(3) *Khair trees* used for the manufacture of *kath* or catechu and in growing lac. The Deputy Commissioner has been left free to settle these trees from year to year to the best advantage. The manufacture of *kath* involves the destruction of the trees. It was therefore decided in 1896 that in villages where *khair* trees are numerous some of them might be allowed to be felled, but that in others it might not be advisable to allow such destruction, specially where the trees are used for lac cultivation. *Khair* trees are used also for house posts and ploughs, and for making charcoal, and the Settlement Officer recommends that the destruction of these trees in the Government estate should be stopped altogether. The Deputy Commissioner does not agree in this recommendation. The Conservator of Forests will be requested to have the trees in question inspected, and to submit a report as to whether, looking to the rules relating to these trees in the reserved and protected forests, it would be inadvisable to give effect to the decision already arrived at by Government.

(4) *Palas and Kusum trees* used in growing lac. It was decided in 1896 that such of the trees as had already been entered in the raiyats' names in the khatians as being in their possession should be settled with them separately at the rates noted on the margin for one year, on the distinct understanding that they would be re-settled with them or not as Government might determine on receipt of fuller information. On this question and that of other

lac-bearing trees, the Lieutenant-Governor awaits the report called for in paragraph 3 (c) of Government Order No. 3292L.R., dated the 17th August 1896.

The excess *mahua* trees have been settled for a period of 15 years with the raiyats for Rs. 3,270 per annum; the *pulas* and *kusum* trees were settled for 1896-97 at Rs. 10,087, and the revenue obtained from *kath* in that year was Rs. 265. No revenue was obtained from silk cocoons in 1896-97.

12. The term of settlement of the land revenue has been fixed at 15 years, commencing from the beginning of the Fasli year in September 1896. The kists fixed at the last settlement were 4 annas, due on the 28th October, 8 annas on the 28th January, and 4 annas on the 28th March, paid respectively from the sale-proceeds of the *bhadoi* crops, of the paddy and other *khairif* crops, and of the *rabi* crops. Rents for *mahua* and lac-bearing trees were payable on the 28th March along with the last kist of land revenue. These kists have been continued, but it appears that a large balance generally remains uncollected at



the end of the financial year, owing presumably to the *rabi* crops not being ready for the market till the end of April, and *mahua* and lac till May. The Lieutenant-Governor therefore accepts the recommendation of the Board and the local officers that the 4-anna instalment of land revenue paid from the sale-proceeds of *rabi* crops should be fixed for the 28th of April, and that rents for *mahua* and lac-bearing trees should be made payable in one instalment on the 28th of May. In view of the circumstances referred to a report is desired as to whether there is any need to make a similar change in the dates at present prescribed for the collection of land revenue in the district of Palamau.

13. The rents were formerly collected through *thikadars* or farmers who were paid a commission of 10 to 15 per cent. on the actual collections made by them, and were allowed certain privileges which were a source of considerable gain. In some villages, the *thikadar* also held the *manjhas*, or *nijjole* lands, at village rates; but as he was entitled to hold these lands only so long as he might manage the village properly and treat the *raiya*s well, he was precluded from acquiring any right of occupancy over them. It came to light that the *thikadars* generally had made no improvements in the estate, and had to a great extent violated the conditions of their leases. The system was therefore abolished and  *khas* management introduced on the 1st April 1896; but the local officers have permission to settle with such individual *thikadars* as may have special claims to consideration on account of long ancestral connection with the village or of extensive improvements effected by them or by their predecessors.

14. No *pattas* have yet been issued, and the Settlement Officer is apparently not in favour of the grant of formal leases, seeing that the *raiya*s are content with the extracts from the *jamabandi* already given to them. But under section 5 of the Chota Nagpur Landlord and Tenant Procedure Act I (B.C.) of 1879, every *raiya* is entitled on demand to receive a *patta* showing (1) the quantity and boundaries of the land, (2) the amount of annual rent, (3) the instalments in which it is to be paid, and (4) any special conditions of the lease, and the *fehrists* distributed do not appear to contain anything as to items (3) and (4). The Lieutenant-Governor therefore accepts the recommendation of the Board and the Commissioner of the Division, that a *patta* should be given to every *raiya* who may demand it, and that should any village be hereafter let to a *thikadar*, a *patta* should be given to each *raiya* before possession is given to the farmer. He also approves the revised form of *patta* submitted with the Board's letter No. 569A., dated the 15th June 1899, subject to the following corrections, viz., the dates given in the preamble should be made to conform with the actual facts—the settlement having taken effect only from September 1896—and a column giving boundaries should be added to the statement at the end of the form, as the law requires this. If there is to be no general distribution of *pattas*, the Board are requested to consider what steps should be taken to make known to the *raiya*s the kists, and the special conditions of the lease, such as those on the restriction of transfers, the term of sub-leases, the supply of *rasad* and coolies, and the reservation of mineral rights and of the right to take up lands for public purposes, &c., which every *raiya* ought to be aware of.

15. As to the question of the maintenance of the settlement records, Government awaits the Board's opinion on the special report which the Director of Land Records is to submit on the question. It will be obvious to them that this question requires very early attention and decision.

16. In paragraph 29 of his final report and in the appendices, the Settlement Officer has recommended the construction or improvement of certain roads. The attention of the District Road Committee should be drawn to these proposals.

17. As suggested in paragraph 375 of the Report, arrangements should be made for the Sub-Deputy Collector in charge of the estate and his *tahsildars* to annually inspect the permanent survey marks and submit a report thereon, and the Lieutenant-Governor agrees with the Board and the Commissioner that the improvement of the markets should be made out of allotments from the management grant.



18. The Lieutenant-Governor will await a report from the Commissioner of the Division showing what, if any, action it is proposed to take on the Settlement Officer's suggestions in Appendices XX and XXI to the final report as to the sale of skins of wild animals, the transfer of cubs, &c., to the Calcutta Zoological Gardens, and the preservation of certain species of birds. The report called for by the Commissioner concerning the manufacture and sale of country guns in Palamau should be submitted with his own remarks to the Judicial Department of this Government.

19. The Lieutenant-Governor's thanks are due to Mr. W. R. Bright for the excellent work done by him, as Deputy Commissioner, in organizing the proceedings and carrying them through the earlier and more difficult stages; to Mr. L. F. Berkeley, who as officer in charge of the survey did excellent work; and to the Settlement Officer Mr. Sunder, who by indefatigable industry, tact in dealing with the people, and mastery of detail, has carried out the settlement with marked success. The acknowledgments of Government are also due to Babu Rameswar Prashad for the good work done by him as Assistant Settlement Officer.

ORDER—Ordered that this Resolution be published in the *Calcutta Gazette* and that a copy of it be sent to the Board of Revenue and to the Conservator of Forests, Bengal.

By order of the Lieutenant-Governor of Bengal,

F. A. SLACK,

*Offg. Secy. to the Govt. of Bengal.*

## RETURNS OF JOINT-STOCK COMPANIES FOR THE YEAR 1898-99.

### No. I.

#### *Abstract of Joint-Stock Companies for the year 1898-99.*

	COMPANIES DIVIDED INTO SHARES.			COMPANIES LIMITED BY GUARANTEE, i.e., POSSESSING NO CAPITAL PAID UP.	
	Number of Companies.	Nominal capital.	Paid-up capital.	Number of Companies.	Number of members.
1	2	3	4	5	6
		Ra.	Ra.		
Working at close of 1897-98 ... ..	666	19,72,33,681	14,11,20,256	39	91,120
Registered during 1898-99 ... ..	21	45,22,600	.....	2	2,200
Capital increased during 1898-99 ... ..	14	41,79,000	1,25,55,786	.....	.....
Capital decreased during 1898-99 ... ..	2	84,500	1,04,000	.....	.....
Ceased to work during 1898-99 ... ..	200	54,97,830	87,28,534	86	85,900
Working at close of 1898-99 ... ..	487	20,03,52,851	14,98,43,508	5	7,420

## No. II.

Joint-stock Companies registered during the year 1898-99.

Number on the register.	Date of registration.	Classification and name of Company.	Objects of Company.	Nominal capital.	Paid-up capital.	Situation of registered office.
1	2	3	4	5	6	7
		I.—BANKING, LOAN, AND INSURANCE COMPANIES.		Rs.	Rs.	
		(a)—Banking and Loan Companies.				
1439	17th Oct. 1898 ...	Pabna Model Co., Ltd. ...	Loan business, &c.	1,00,000	...	Raghabpur, Pabna town.
		(b)—Insurance Companies.				
1430	15th Aug. „ ...	Sáyerbákhá Krisi Fund Sá-háyya Co., Ltd.	Life insurance ...	5,000	...	.....
			Total of Banking, Loan and Insurance Companies.	1,05,000	...	
		II.—TRADING COMPANIES.				
		(a)—Merchants and Traders.				
1422	25th April „ ...	Indian Co-operative Journal Society, Ltd.	To publish newspapers.	20,000	...	No. 82, Harrison Road, Calcutta.
1425	21st May „ ...	Atkinson Brothers, Ltd. ...	Trading in timber, stone, sand, &c.	3,00,000	...	No. 18, Chowringhee Road, Calcutta.
1426	23rd „ „ ...	Anukhal Bandhava Banijyágar Co., Ltd.	General Traders...	20,000	...	Anukhal, Kalna, Burdwan.
1446	16th Feb. 1899 ...	Chota Nagpur Timber and Trading Co., Ltd.	To carry on the business of timber merchants, &c., &c.	2,00,000	...	.....
		(b) Navigation.		5,40,000	...	
		(c) Railways and Tramways.				
		(d) Co-operative Associations.				
1431	17th Aug. 1898 ...	Devereux & Co., Ltd. ...	Co-operative business; to sell wine, &c., &c.	1,00,000	...	No. 4, Bankhall Street, Calcutta.
1432	17th „ „ ...	Samuel Fitz & Co., Ltd. ...	Ditto ...	1,00,000	...	Ditto ditto.
		(e) Shipping, Landing and Warehousing.		2,00,000	...	
			Total of Trading Companies.	7,40,000	...	
		III.—MILLS AND PRESSES.				
		(a) Cotton Mills.				
1443	9th Nov. „ ...	Serampore Cotton Mills, Ltd. ...	Spinning and weaving cotton.	9,00,000	...	No. 37, Clive Street, Calcutta.
		(b) Jute Mills.		9,00,000	...	
		(c) Mills for Cotton, Jute, Wool, Silk, Hemp, &c.				
		(d) Cotton and Jute Screws and Presses.				
		(e) Other Mills and Presses.		9,00,000	...	
		IV.—TEA AND OTHER PLANTING COMPANIES.				
		(a) Tea.				
1423	30th April „ ...	Rangmala Tea Co., Ltd. ...	Cultivators and manufacturers of tea.	60,000	...	No. 3-4, Hare Street, Calcutta.
1427	26th May „ ...	Lohaghur Tea Co., Ltd. ...	Ditto ...	1,00,000	...	No. 14, Old Court House Street, Calcutta.
1434	29th Aug. „ ...	Dhoodaam Tea Co., Ltd. ...	Ditto ...	2,40,000	...	Debrugarh, Assam.
1448	18th Mar. 1899 ...	Simul Barie Tea Co., Ltd. ...	Ditto ...	50,000	...	.....
1449	22nd „ „ ...	Kodala, Ltd. ...	Cultivators and manufacturers of tea, coffee, &c.	60,000	...	Kadala, Chittagong.
		(b) Others.		5,10,000	...	
1421	17th May 1898 ...	Chandpur Co., Ltd. ...	Planting and manufacturing indigo.	7,32,500	...	No. 7, Hare Street, Calcutta.
			Total of Tea and other Planting Companies.	12,42,500	...	

Number on the register.	Date of registration.	Classification and name of Company.	Objects of Company.	Nominal capital.	Paid-up capital.	Situation of registered office.
1		3	4	5	6	7
		<b>V.—MINING AND QUARRYING COMPANIES.</b>		Rs.	Rs.	
		(a) <i>Coal.</i>				
1428	7th June 1898 ...	Royalty Coal Syndicate, Ltd. ...	Mining coal ...	1,40,000	...	No. 38, Strand Road, Calcutta.
1433	23rd Aug. " ...	Nandi Coal Co., Ltd. ....	Ditto	51,000	...	
1437	14th Oct. " ...	Chota Nagpur Coal and Mica Mining Co., Ltd. ....	Mining coal and mica.	20,000	...	Giridih, Hazaribagh.
1441	1st Nov. " ...	Nowaghur Coal Co., Ltd. ...	Mining coal ...	6,12,000	...	
1442	1st " " ...	Lutchipore Coal Co., Ltd. ...	Ditto	6,12,000	...	
		(b) <i>Others.</i>		14,35,000	...	
1444	20th Dec. " ...	Sylhet Lime Co., Ltd. ....	Mining and quarrying lime.	1,00,000	...	No. 4, Fairlie Place Calcutta.
			Total of Mining and Quarrying Companies.	15,35,000	...	
		<b>VI.—ICE-MANUFACTURING COMPANIES.</b>				
		<b>VII.—SUGAR-MANUFACTURING COMPANIES.</b>				
		<b>VIII.—BREWERIES.</b>				
		<b>IX.—OTHER COMPANIES.</b>				

No. III.

*Companies Limited by Guarantee, registered during the year 1898-99.*

Number on the register.	Date of registration.	Classification and name of Company.	Objects of Company.	Number of members.	Situation of registered office.
1	2	3	4	5	6
		<b>I.—BANKING, LOAN AND INSURANCE COMPANIES.</b>			
		(a) <i>Banking and Loan Companies.</i>			
		(b) <i>Insurance Companies.</i>			
1435	21st Sept. 1898 ...	Enginemem and Firemen's Union in India, Ltd.	Life Insurance	2,000	
		<b>II.—TRADING COMPANIES.</b>			
		(a) <i>Merchants and Traders.</i>			
		(b) <i>Navigation.</i>			
		(c) <i>Railways and Tramways.</i>			
		(d) <i>Co-operative Associations.</i>			
		(e) <i>Shipping, Landing and Warehousing.</i>			
		<b>III.—MILLS AND PRESSES.</b>			
		(a) <i>Cotton Mills.</i>			
		(b) <i>Jute Mills.</i>			
		(c) <i>Mills for Cotton, Jute, Wool, Silk, Hemp, &amp;c.</i>			
		(d) <i>Cotton and Jute screws and Presses.</i>			
		(e) <i>Other Mills and Presses.</i>			

Number on the register.	Date of registration.	Classification and name of Company.	Objects of Company.	Number of members.	Situation of registered office.
1		3	4	5	6
		IV.—TEA AND OTHER PLANTING COMPANIES. (a) Tea. (b) Coffee and Cinchona. (c) Others. V.—MINING AND QUARRYING COMPANIES. VI.—ICE-MANUFACTURING COMPANIES. VII.—SUGAR-MANUFACTURING COMPANIES. VIII.—BREWERIES. IX.—OTHER COMPANIES.			
1440	1st Nov. 1898	Bali Sadharani Sabha*	To improve the condition of the town of Bali, Belur, and other neighbouring places.	200	Bali, Howrah.

\* Registered under section 26.

## No. IV.

Joint-Stock Companies that have increased their Capital during the year 1898-99.

Number on the register.	Date of registration.	Classification and name of Company.	Date of increase.	PREVIOUS CAPITAL.		PRESENT CAPITAL.		(DIFFERENCE.)	
				Nominal.	Paid up.	Nominal.	Paid up.	Nominal.	Paid up.
1	2	3	4	5	6	7	8	9	10
		I.—BANKING, LOAN AND INSURANCE COMPANIES. (a) Banking and Loan Companies. (b) Insurance Companies. II.—TRADING COMPANIES. (a) Merchants and Traders.		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
9	30th Mar. 1895	Burn & Co., Ltd.	25th Apl. 1898	18,00,000	18,00,000	25,00,000	18,00,000	7,00,000	...
		(b) Navigation.							

Number on the register.	Date of registration.	Classification and name of Company.	Date of increase.	PREVIOUS CAPITAL.		PRESENT CAPITAL.		DIFFERENCE.	
				Nominal.	Paid up.	Nominal.	Paid up.	Nominal.	Paid up.
1	2	3	4	5	6	7	8	9	10
		(c) Railways and Tramways.		Ra.	Ra.	Ra.	Ra.	Ra.	Ra.
		(d) Co-operative Associations.							
		(e) Shipping, Landing and Warehousing.							
		III.—MILLS AND PRESSES.							
		(a) Cotton Mills.							
		(b) Jute Mills.							
361	25th Sept. 1877	Kamarhatty Co., Ltd. ...	26th May 1898	8,00,000	4,00,000	16,00,000	15,50,500	8,00,000	11,50,500
461	30th Dec. 1882	Kanknarrah Co., Ltd. ...	26th May 1898	14,00,000	9,10,000	17,50,000	9,10,000	8,50,000	...
585	28th Nov. 1890	Sibpur Jute Manufactur- Co., Ltd.	3rd Mar. 1899	10,00,000	10,00,000	17,50,000	10,00,000	7,50,000	...
		(c) Mills for Cotton, Jute, Wool, Silk, Hemp, &c.							
		(d) Cotton and Jute Spinning and Presses.							
		(e) Other Mills and Presses.							
444	28th July 1892	Titaghur Paper Mills Co., Ltd.	18th Feb. 1899	10,00,000	10,00,000	15,00,000	10,00,000	5,00,000	...
1899	26th Jan. 1897	Bihar Machine Works Co., Ltd.	29th Sept. 1898	30,000	12,525	75,000	20,375	45,000	7,850
		IV.—TEA AND OTHER PLANTING COMPANIES.							
		(a) Tea.							
292	7th Aug. 1874	Joonktollie Tea Co., Ltd.	9th Sept. 1898	80,000	80,000	1,16,000	80,000	36,000	...
834	17th Mar. 1894	Hati Khira Tea Co., Ltd.	19th Apl. 1898	6,00,000	6,00,000	9,00,000	6,00,000	3,00,000	...
1018	16th Sept. 1895	Kaddom Tea Co., Ltd. ...	10th June 1898	50,000	50,000	1,00,000	50,000	50,000	...
1851	2nd Feb. 1897	Burrahenga Tea Co., Ltd.	6th Mar. 1899	40,000	...	58,000	31,400	18,000	31,400
1965	10th Mar. 1897	Kingalee-Golaghat-Assam Tea Co., Ltd.	11th Feb. 1899	4,50,000	...	4,80,000	4,50,000	80,000	4,50,000
		(b) Others.							
		V.—MINING AND QUARRYING COMPANIES.							
		(a) Coal.							
1112	23rd May 1896	Sitarampore Coal Co., Ltd.	14th Oct. 1898	2,00,000	2,00,000	8,00,000	2,11,000	1,00,000	11,000
1858	19th Feb. 1897	Ondal Coal Co., Ltd. ...	16th June 1898	5,00,000	2,37,500	9,00,000	6,00,000	4,00,000	8,82,500
1408	20th Dec. 1897	Tamra Coal Co., Ltd. ...	11th Aug. 1898	3,00,000	...	4,00,000	3,00,000	1,00,000	3,00,000
		(b) Others.							
		VI.—ICE MANUFACTUR- ING COMPANIES.							
		VII.—SUGAR-MANUFAC- TURING COMPANIES.							
		VIII.—BREWERIES.							
		IX.—OTHERS.							



## No. V.

Joint-Stock Companies that have reduced their Capital during the year 1898-99.

Number on the register.	Date of registration.	Classification and name of Company.	Date of reduction.	PREVIOUS CAPITAL.		PRESENT CAPITAL.		DIFFERENCE.	
				Nominal.	Paid up.	Nominal.	Paid up.	Nominal.	Paid up.
1	2	3	4	5	6	7	8	9	10
		I.—BANKING, LOAN AND INSURANCE COMPANIES. (a) <i>Banking and Loan Companies.</i> (b) <i>Insurance Companies.</i> II.—TRADING COMPANIES. (a) <i>Merchants and Traders.</i>		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
750	12th May 1898	India Publishers, Ltd. ... (b) <i>Navigation.</i> (c) <i>Railways and Tramways.</i> (d) <i>Co-operative Associations.</i> (e) <i>Shipping, Landing and Warehousing.</i> III.—MILLS AND PRESSES. (a) <i>Cotton Mills.</i> (b) <i>Jute Mills.</i> (c) <i>Mills for Cotton, Jute, Wool, Silk, Hemp, &amp;c.</i> (d) <i>Cotton and Jute Screens and Presses.</i> (e) <i>Other Mills and Presses.</i> IV.—TEA AND OTHER PLANTING COMPANIES. (a) <i>Tea.</i>	6th Oct. 1898	2,00,000	1,80,000	1,26,000	26,000	74,000	1,04,000
868	12th July 1898	Hindu Tea Co., Ltd. ... (b) <i>Others.</i> V.—MINING AND QUARRYING COMPANIES. (a) <i>Coal.</i> (b) <i>Others.</i> VI.—ICE MANUFACTURING COMPANIES. VII.—SUGAR-MANUFACTURING COMPANIES. VIII.—BREWERIES. IX.—OTHER COMPANIES.	11th Sept. 1898	35,000	24,500	24,500	24,500	10,500	...

No. VI.

Joint-stock Companies that, having ceased to work, have gone into liquidation, or have been finally dissolved (or otherwise become defunct) during the year 1898-99.

Number on the register.	Date of registration.	Classification and name of Company.	Nominal capital.	Paid-up capital.	Date of going into liquidation.	Date of final dissolution.
1	2	3	4	5	6	7
		<b>I.—BANKING, LOAN, AND INSURANCE COMPANIES.</b>	<b>Rs.</b>	<b>Rs.</b>		
		<i>(a) Banking and Loan Companies.</i>				
899 1355	26th Feb. 1880 18th " 1896	Hindu Union Bank, Ltd. ... Elashin Sreemanta Sawdagar Co., Ltd.	20,000 20,000	5,100 .....	..... 25th Mar. 1899.	Defunct.
		<i>(b) Insurance Companies.</i>				
751	16th May 1893	Tangali Family Relief Fund Co., Ltd.	15,000	2,850	.....	Defunct.
762	20th " "	Bagirhat Mutual Relief Co., Ltd.	7,500	4,860	22nd Sept. 1898.	
768	29th July " "	Rayerkati Family Pension Fund Co., Ltd.	500	315	.....	
770	7th Aug. " "	Family Maintenance Co., Ltd. ...	6,000	110	.....	
778	8th Sept. " "	Jalabari Life Insurance Co., Ltd.	10,000	518	.....	Defunct.
785	28th " " "	General Relief Association Co., Ltd.	15,900	653	.....	
795	4th Dec. " "	Bhandaria Bharat Hitaisi Bhandar Co., Ltd.	3,700	165	.....	
797	13th " " "	Universal Relief Fund Co., Ltd. ...	1,500	814	11th Feb. 1898	28th Dec. 1898.
813	29th Jan. 1894	Barisal Sadharan Sahayya Samiti, Ltd.	500	500	4th " 1899	4th Feb. 1899.
817	8th Feb. " "	Beneficial Fund Co., Ltd. ...	10,500	2,329	.....	Defunct.
824	19th " " "	Provident Association, Ltd. ...	000	7,000	17th Aug. 1897	4th Oct. 1898.
828	28th " " "	Karapara Family Relief Co., Ltd.	313	95	18th Jan. 1899	18th Jan. 1899.
830	7th Mar. " "	Utter Sahabazpur Bhabhi Hitaisi Dhanagar Fund Co., Ltd.	1,500	688	.....	Defunct.
831	13th " " "	Avaynagar Family Pension Fund Co., Ltd.	1,000	£7	14th Jan. 1898	24th Jan. 1899.
835	17th " " "	Rayerkati Poor Relief Fund Co., Ltd.	6,250	.....	.....	
845	3rd " " "	Edilpur Paribarik Sangraha Samiti, Ltd.	2,000	.....	.....	
859	27th " " "	Narayanpur Jana Hitakari Fund Co., Ltd.	720	546	.....	
860	1st May " "	Rahamatpur Useful Fund Co., Ltd.	330	330	.....	
863	7th " " "	Bidyandakati Relief Co., Ltd. ...	625	88	.....	
866	11th " " "	Porgola Bharat Bandhu Co., Ltd.	375	61	.....	
868	14th " " "	Juluhar Sadharan Sahayya Samiti Fund Co., Ltd.	925	469	.....	
869	15th " " "	Jalabari Sahayya Samiti, Ltd. ...	20,000	.....	.....	
872	19th " " "	Oriental Relief Fund Co., Ltd. ...	3,000	.....	.....	
875	21st " " "	Amarajuri Union Fund Co., Ltd.	1,375	.....	.....	
881	5th June " "	Ranipur Unnati Sadhan Bhandar Co., Ltd.	1,500	65	.....	Defunct.
	8th " " "	Eastern Poor Relief Fund Co., Ltd.	2,293	.....	.....	
	16th " " "	Baukhir Daridra Dukha Nibarani Relief Co., Ltd.	1,250	.....	.....	
87	16th " " "	Sahibganj Sahayya Bhandar Fund Co., Ltd.	2,250	.....	.....	
889	16th " " "	Mulghar Pension Fund Co., Ltd.	2,500	.....	.....	
894	19th " " "	Jhalakati Poor Fund Co., Ltd. ...	300	.....	.....	
895	19th " " "	Hoybatpur Jiban Bima Co., Ltd.	260	130	.....	
897	23rd " " "	Pecuniary Helping Fund Co., Ltd.	2,500	60	.....	
898	23rd " " "	Kalighat Family Relief Co., Ltd.	18,000	.....	.....	
899	26th " " "	Idilkati Sahayya Bhandar Co., Ltd.	5,000	.....	.....	
901	10th July " "	Madaripur Special Relief Fund Co., Ltd.	9,000	.....	13th Mar. 1899.	
903	19th " " "	Beldakhan Janashitaisi Fund Co., Ltd.	1,500	.....	.....	
910	3rd Aug. " "	Kandiala Sulay Sahayya Samiti, Ltd.	3,000	.....	.....	
911	4th " " "	Kritipasa Sahayya Samiti, Ltd. ...	450	.....	.....	
916	20th " " "	Jatiya Sahayya Samiti, Ltd. ...	875	875	.....	
917	20th " " "	Baukati Hitaisi Bhandar Co., Ltd.	500	500	.....	
919	21st " " "	Sarvajana Hitaisi Fund Co., Ltd.	2,500	2,105	.....	
930	15th Sept. " "	Botda Janashitaisi Bhandar Co., Ltd.	1,125	.....	.....	Defunct.
931	20th " " "	Kangal Bhandar Co., Ltd. ...	2,000	1,903	.....	
933	25th " " "	Kalkini Sadharan Sahayya Samiti Co., Ltd.	2,344	.....	.....	
938	31st Oct. " "	New Indian Life Assurance Co., Ltd.	20,000	.....	.....	
943	16th Nov. " "	Aghorbari Sarvadina Hitaisi Fund Co., Ltd.	1,325	.....	.....	
944	17th " " "	Sadharan Artha Sangraha Samiti, Ltd.	500	.....	.....	

Number on the register.	Date of registration.	Classification and name of Company.	Nominal capital.	Paid-up capital.	Date of going into liquidation.	Date of final dissolution.
1	2	3	4	5	6	
		I.—BANKING, LOAN, AND INSURANCE COMPANIES—contd.	Rs.	Rs.		
		(b) Insurance Companies—contd.				
948	26th Nov. 1894	Jivika Sangathan Samiti, Ltd. ...	875	138		
956	18th Dec. "	Tangail Universal Marriage Fund Co., Ltd.	1,200	940	16th Feb. 1899.	Defunct.
957	20th "	Jautha Sahayya Tahabil Co., Ltd.	1,750	.....		
969	29th Jan. 1895	Phulbari Sadharan Hita Bhandar Co., Ltd.	1,000	.....		Defunct.
990	26th May "	Malda Marriage Fund Co., Ltd. ...	800	800	12th Dec. 1898.	
1000	17th July "	Salil Arrah Marriage Fund, Ltd. ...	5,000	841	8rd Nov. "	
1034	15th Nov. "	East Bengal Provident Fund Co., Ltd.	8,400	.....		
1058	28th Jan. 1896	Bibaha Sahayya Jautha Tahabil Co., Ltd.	5,000	.....		
1059	3rd Feb. "	East Bengal Friend Fund Co., Ltd.	5,600	.....		
1069	18th "	Nalsindura Kriai Sahayya Bhandar Co., Ltd.	20,000	2,092		
1071	20th "	Ghatail Family Wedding Fund Co., Ltd.	1,500	323		Defunct.
1082	27th Mar. "	Nagarpur Rin Sodha Co., Ltd. ...	3,000	.....		
1085	1st April "	Kaipataru Sahayya Bhandar, Ltd.	20,000	.....		
1092	15th "	Nagdaha Marriage Fund Co., Ltd.	4,000	.....		
1097	30th "	Khamar Bichandai Kriai Sahayya Bhandar Co., Ltd.	20,000	.....		
1100	4th May "	Chandrapatal Parivarik Sahayya Fund Co., Ltd.	2,400	.....	21st Feb. 1898	6th April 1898.
1103	13th "	Mirzapur Kantalia Paribarik Hita Bhandar Co., Ltd.	750	.....		
1104	13th "	Mirzapur Kantalia Bibaha Sahayya Samiti, Ltd.	3,000	798		Defunct.
1105	16th "	Khamar Halokhana Sammilani Sahayya Bhandar, Ltd.	20,000	.....	9th May 1898.	
1111	21st "	Nandangati Marriage Fund Co., Ltd.	1,500	363		
1115	27th "	Sindurmati Sahayya Bhandar Co., Ltd.	10,000	.....		
1119	3rd June "	Uttar Banga Rin Sodha Sahayya Bhandar Co., Ltd.	12,000	.....		
1120	3rd "	Gotamari Kriai Sahayya Fund Co., Ltd.	10,000	.....		Defunct.
1122	5th "	Kasipur Universal Relief Fund, Ltd.	20,000	1,249		
1123	6th "	Kauniya Mutual Helping Fund, Ltd.	20,000	.....		
1124	8th "	English Bazar Mutual Relief Fund Co., Ltd.	400	205	9th Feb. 1899.	
1126	11th "	Solakuda Paribarik Sahayya Co., Ltd.	20,000	.....		
1138	9th July "	Falda Debtors' Helping Fund Co., Ltd.	3,000	.....		
1140	11th "	Ganespur Guratipara Kriai Bibaha Rin Sodha Sahayya Samiti, Ltd.	20,000	.....		Defunct.
1141	14th "	Gajerkuti Abhab Mochan Co., Ltd.	20,000	.....		
1145	20th "	Atbil Universal Relief Fund, Ltd.	20,000	.....		
1149	24th "	Sindurmati Universal Relief Fund, Ltd.	5,000	.....		
1150	25th "	Khamar Bhotamari Manonita Sahayya Bhandar Co., Ltd.	15,000	.....	8th Feb. 1898	6th May 1898.
1153	1st Aug. "	Charabari Bibaha Bhandar Co., Ltd.	1,500	.....	19th Jan. "	21st April "
1155	4th "	Khorbari Rin Sodha Co., Ltd. ...	20,000	2,098		
1157	5th "	Kotesvar Des-Hitaisi Fund Co., Ltd.	10,000	.....		
1159	6th "	Kantalbadi Bibidha Sahayya Bhandar, Ltd.	20,000	.....		
1162	7th "	Rajarhat Relief Fund, Ltd. ...	20,000	.....		
1163	8th "	Dakalibandha Sadharana Sahayya Bhandar Co., Ltd.	5,000	.....		Defunct.
1165	10th "	Nandangati Rin Sodha Sahayya Fund Co., Ltd.	5,000	.....		
1166	11th "	Madhukhali Relief Fund Co., Ltd.	4,000	.....		
1173	19th "	Atbil Jana Hitaisi Fund Co., Ltd.	10,000	.....		
1176	24th "	Gangarhat Bividha Sahayya Bhandar, Ltd.	20,000	.....		
1177	24th "	Bholkova Rin Sodha O Marriage Fund, Ltd.	20,000	.....	6th Dec. 1898.	
1178	24th "	Satpataki Sammilani Bhandar Co., Ltd.	10,000	.....		
1180	25th "	Botha Universal Helping Fund Co., Ltd.	20,000	1,245		
1182	25th "	Hariçvar Kaloya Prakasya Daserhat Bividha Sahayya Bhandar Co., Ltd.	20,000	.....		Defunct.
1183	25th "	Mahica Khacā Sardarpara Sarvajana Hitaisi Sahayya Bhandar, Ltd.	5,000	.....		
1184	25th "	Baniadangi Kriai Rin O Bibaha Sahayya Bhandar Co., Ltd. ...	20,000	.....		

Number on the register.	Date of registration.	Classification and name of Company.	Nominal capital.	Paid-up capital.	Date of going into liquidation.	Date of final dissolution.
1	2	3	4	5	6	7
		I.—BANKING, LOAN, AND INSURANCE COMPANIES—contd.	Rs.	Rs.		
		(b) Insurance Companies—contd.				
1185	25th Aug. 1896	Bidyananda Universal Helping Co., Ltd.	12,000	.....	.....	
1186	26th "	Danyabari Parcaavidha Sahayya Bhandar Co., Ltd.	20,000	1,544	.....	
1189	27th "	Madhupur Sadharan Sahayya Samiti, Ltd.	5,000	.....	.....	Defunct.
1194	29th "	Bandhava Samiti Fund Co. Ltd. ...	4,200	329	.....	
1196	1st Sept. "	Chinai Sulava Sahayya Bhandar Co., Ltd.	18,000	2,843	16th May 1898.	
1197	1st "	Batrigach Kazirhat Hitaisi Sahayya Bhandar Co., Ltd.	12,000	.....	.....	
1198	1st "	Balagram Caturvidha Sahayya Bhandar Samiti Co., Ltd.	16,250	.....	.....	
1200	2nd "	Gopalpur Saikhorhat Universal Helping Fund, Ltd.	20,000	.....	.....	Defunct.
1201	2nd "	Jamuna Sarvajatiya Sammilani Sulabha Sahayya Bhandar, Ltd.	10,000	.....	.....	
1202	3rd "	Nagarbadi Kin Sodha Sahayya Samiti, Ltd.	5,000	833	5th July 1898.	
1203	3rd "	Badalayo Jagat Hitaisi Bhandar, Ltd.	4,500	.....	.....	Defunct.
1205	5th "	Jamirbari Jnanada Sucohhita Sahayya Samiti, Ltd.	10,000	.....	8th Feb. 1898	6th May 1898.
1206	5th "	Mauza Gacculka Sadharan Sahayya Bhandar Co., Ltd.	5,000	.....	.....	
1208	7th "	Khaimar Jamirbadi Saubhagya Sparca Muni, Ltd.	16,000	.....	.....	
1209	7th "	Saulamari Sammilani Sahayya Bhandar, Ltd.	10,000	725	.....	
1210	8th "	Singimari Kriai O Bibaha Sahayya Bhandar Co., Ltd.	5,000	.....	.....	
1211	8th "	Baraipada Sarvajana Hitaisi Sulabha Sahayya Manonita Fund Co., Ltd.	20,000	.....	.....	Defunct.
1216	9th "	Gobindpur Bibidha Sahayya Co., Ltd.	5,000	.....	.....	
1218	10th "	Rajpur Bharat Suhrud Fund, Ltd.	10,000	.....	.....	
1219	11th "	Rangpur O Galla Rajasvadi Adaya Co., Ltd.	5,250	.....	.....	
1220	12th "	Phatikcaga Sarvajana Hitaisi Sahayya Bhandar Co., Ltd.	5,000	.....	.....	
1221	12th "	Bochapanga Hitaisi Fund, Ltd. ...	20,000	.....	.....	
1230	18th "	Chatna Kamarkuli Kin Sodha Sahayya Co., Ltd.	10,000	761	30th Mar. 1899.	
1236	23rd "	Bangavasi Sarvajana Hitaisi Fund Co., Ltd.	6,000	.....	.....	
1237	23rd "	Nakbenda Sulava Sahayya Samiti Co., Ltd.	20,000	.....	.....	
1244	30th "	Pirzacha Sammilani Sahayya Britti Bhandar Co., Ltd.	20,000	.....	.....	
1245	1st Oct. "	Jagannathpur Bina Sudé Karja Sahayya Bhandar Co., Ltd.	10,000	.....	.....	
1249	1st "	Pathardavi Universal Fund, Ltd.	20,000	.....	.....	
1251	3rd "	Kalikapur Sulabha Sukhvilash Sahayya Bhandar Co., Ltd.	10,000	690	.....	
1252	3rd "	Jhunagach Capani Bina Sudé Taka Karja Deon Eban Kriai Sahayya Bhandar Co., Ltd.	9,000	.....	.....	
1253	5th "	Kicoraganja Popular Helping Fund, Ltd.	20,000	.....	.....	Defunct.
1254	5th "	Nesbatganja Sarva Hitaisi Saptavidha Sahayya Bhandar, Ltd.	20,000	.....	.....	
1256	7th "	Jatrapur Kin Hal Ghar Co., Ltd.	20,000	.....	.....	
1258	7th "	Phulgach Sulabha Kriai O Corrugated-iron House Sahayya Co., Ltd.	20,000	.....	.....	
1259	7th "	Patikapara Sadharana Sansarik Sahayya Bhandar Co., Ltd.	10,000	851	.....	
1260	8th "	Kagjipada Sarvajana Hitaisi Fund Co., Ltd.	10,000	.....	.....	
1262	8th "	Radha Krishnapur Saptavidha Sahayya Bhandar, Ltd.	20,000	.....	.....	
1263	8th "	Malda Magdampur Indigont Provident Fund Co., Ltd.	320	296	10th Jan. 1899.	
1265	8th "	Latakbad Kamanaiddhi Sahayya Bhandar Co., Ltd.	10,000	.....	.....	
1267	9th "	Baispukur Sahayya Samiti Co., Ltd.	10,000	.....	.....	Defunct.
1271	3rd Nov. "	Kalikapur Sarva Hitaisi Bina Sudé Karja Dadan Co., Ltd.	20,000	.....	.....	
1274	6th "	Vidyavagisa Sammilani Sahayya Bhandar, Ltd.	20,000	.....	17th May 1898.	
1275	9th "	Maduti Sarvadesa Hitaisi Sahayya Bhandar Co., Ltd.	10,000	.....	.....	
1277	9th "	Nayarlhat Sarvajatiya Sammilani Pancavidha Sulabha Sahayya Bhandar, Ltd.	10,000	.....	.....	Defunct.

Number on the register.	Date of registration.	Classification and name of Company.	Nominal capital.	Paid-up capital.	Date of going into liquidation.	Date of final dissolution.
1	2	3	4	5	6	7
		I.—BANKING, LOAN, AND INSURANCE COMPANIES— <i>contd.</i> (b) <i>Insurance Companies—contd.</i>	Rs.	Rs.		
1280	10th Nov. 1896	Kaitari Sarvavidha Bhandar Co., Ltd.	20,000	.....	....	Defunct.
1281	12th " "	Danga Deqa Hitaisi Rin Sodha Fund Co., Ltd.	2,250	.....	.....	
1282	12th " "	Namuri Harati Baradarga Rin Sodha O Krisi Sahayya Fund Co., Ltd.	9,000	.....	.....	
1283	17th " "	Kiamat Dhaolai Rin Sodha Bibaha Sahayya Bhandar Co., Ltd.	2,000	.....	.....	
1284	18th " "	Kucut Sahayya Samiti Fund Co., Ltd.	300	286	17th Feb. 1899.	
1285	18th " "	Tangbhanga Sadharana Sahayya Bhandar Co., Ltd.	8,000	.....	.....	
1287	20th " "	Parvatipur Public Helping Fund Co., Ltd.	20,000	486	.....	
1289	26th " "	Naoyavaga Trividha Sahayya Bhandar Co., Ltd.	10,000	.....	.....	
1291	26th " "	Tilai Sarvajana Hitaisi Kalpataru Fund Co., Ltd.	10,000	.....	.....	Defunct.
1295	2nd Dec. "	Candanpat Kaliganj Hat Navavidha Sahayya Bhandar, Ltd.	5,000	.....	.....	
1296	2nd " "	Kavir Mahmud Desonnati Sulabha Hitakar Sahayya Bhandar Co., Ltd.	4,000	.....	.....	
1297	3rd " "	Paschimdoar Bhutan Sarvavidha Sahayya Bhandar Co., Ltd.	9,000	.....	.....	
1300	5th " "	Panga General Helping Fund Co., Ltd.	9,000	.....	.....	
1301	7th " "	Budadarga Mesta Ghar Krisi O Rin Trividha Sahayya Bhandar Co., Ltd.	15,000	576	.....	
1302	7th " "	Hasanabad Budirdanga Jana Hitaisi Sammilani Sahayya Bhandar Co., Ltd.	5,000	.....	.....	
1303	10th " "	Nahali Parivarik Sahayya Samiti, Ltd.	1,000	430	28th Feb. 1899.	
1306	15th " "	Falda New Relief Fund, Ltd. ...	4,000	.....	.....	Defunct.
1310	21st " "	Laksmampur Sahayya Bhandar Co., Ltd.	20,000	.....	5th Apl. 1899.	
1311	22nd " "	Khukni Daulatpur Sarvajanika Sahayya Samiti, Ltd.	1,500	314	25th Aug. 1898	26th Sept. 1898.
1312	28th " "	Rasulpur Khajna Adaya Sahayya Co., Ltd.	20,000	.....	.....	
1313	28th " "	Ghaneswama Sammilani Sahayya Bhandar Co., Ltd.	3,000	.....	.....	
1317	30th " "	Saptapada Sarvavidha Sahayya Bhandar Co., Ltd.	20,000	.....	.....	
1318	31st " "	Nikhi Marriage Fund Co., Ltd. ...	2,250	281	.....	
1321	2nd Jan. 1897	Rangpur Caudhuripara General Sahayya Samiti, Ltd.	20,000	.....	.....	
1322	4th " "	Moktarkuti Bividha Sahayya Bhandar Co., Ltd.	20,000	.....	.....	
1327	11th " "	Masrut Dhaolai Rin Sodha Sahayya Bhandar Co., Ltd.	2,000	.....	.....	
1333	20th " "	Syamasinha Atiyabadi Brihat Sahayya Fund Co., Ltd.	20,000	.....	.....	
1337	23rd " "	Sadharan Bibaha Sahayya Co., Ltd.	18,000	330	.....	Defunct.
1338	25th " "	Jodagach Model Helping Fund, Ltd.	2,500	.....	.....	
1345	1st Feb. "	Khamar Birahima Sadharana Sahayya Bhandar Fund Co., Ltd.	2,000	.....	.....	
1347	1st " "	Sankoa Sadanustan Sahayya Samiti, Ltd.	20,000	.....	.....	
1348	1st " "	Kisorapur Sadavidha Sahayya Nivas Fund Co., Ltd.	1,500	.....	.....	
1349	1st " "	Gaivanda Rin Sodhadi Pancavidha Sahayya Bhandar Samiti, Ltd.	20,000	914	.....	
1350	2nd " "	Ikracali Munsiganjahat Sarva Sadanustan Sahayya Co., Ltd.	20,000	.....	.....	
1352	9th " "	Bagulamari Bividha Bhasyaka Sahayya Bhandar Co., Ltd.	5,000	.....	.....	
1360	26th " "	Palicada Pancavidha Sahayya Co., Ltd.	20,000	.....	.....	
1364	10th Mar. "	Kulaghat Sarvajanik Abhava Mocaka Bhandar Co., Ltd.	10,000	.....	.....	
1369	19th " "	Damurhuda Sansarik Sancya Bhandar Co., Ltd.	10,000	.....	14th Mar. 1899.	
1371	26th " "	Sakrail Saptavidha Sahayya Co., Ltd.	5,000	397	26th May 1898.	
1376	7th April "	Engleth Bazar Birth Provident Fund Co., Ltd.	250	.....	9th Jan. 1899.	
1377	9th " "	Baradaba Sahayya Fund Co., Ltd.	20,000	.....	.....	Defunct.
1378	9th " "	Jayapurhat Bina Sudé Taka Karjja Sahayya Bhandar Co., Ltd.	4,000	.....	.....	



Number on the register.	Date of registration.	Classification and name of Company.	Nominal capital.	Paid-up capital.	Date of going into liquidation.	Date of final dissolution.
1	2	3	4	5	6	7
<b>I.—BANKING, LOAN, AND INSURANCE COMPANIES—conold.</b>			Rs.	Rs.		
<i>(b) Insurance Companies—conold.</i>						
1380	19th April 1897	Bhatochala Islamiya Canda Rabibar Co., Ltd.	20,000	.....	.....	Defunct.
1382	21st " "	Kutavpur Bina Sudé Rindan Sahayya Bhandar Co., Ltd.	16,000	.....	.....	
1383	22nd " "	Dhopapada Sahayya Fund Co., Ltd.	20,000	.....	.....	
1384	23rd " "	Jamjami Sahayya Fund Co., Ltd.	5,000	.....	.....	
1392	9th June "	Jalapur Parivarik Sahayya Fund Co., Ltd.	6,000	.....	30th Mar. 1899.	
1397	3rd Aug. "	Cadapada Astaprakar Sahayya Co., Ltd.	5,000	270	26th Sept. 1898.	
1401	8th Sept. "	Bagulagadi Sammilani Sahayya Bhandar, Ltd.	12,000	516	27th Jan. 1899.	
<b>II.—TRADING COMPANIES.</b>						
<i>(a) Merchants and Traders.</i>						
991	6th June 1895	Twinning Calcutta Theatrical Co., Ltd.	25,000	.....	.....	Defunct.
1003	25th July "	Ballaghatta Co., Ltd. ...	50,000	27,200	5th Oct. 1898.	29th June 1898.
1084	1st April 1896	Indian Patent's Co., Ltd. ...	2,00,000	.....	5th May 1897	
<i>(b) Navigation.</i>						
<i>(c) Railways and Tramways.</i>						
<i>(d) Co-operative Associations.</i>						
<i>(e) Shipping, Landing and Warehousing.</i>						
<b>III.—MILLS AND PRESSES.</b>						
<i>(a) Cotton Mills.</i>						
<i>(b) Jute Mills.</i>						
1007	8th Aug. 1895	Gordon Mills Co., Ltd. ...	3,00,000	3,00,000	25th Jan. 1899.	
<i>(c) Mills for Cotton, Jute, Wool, Silk, Hemp, &amp;c.</i>						
974	2nd Mar. 1895	Howrah Hydraulic Press Co., Ltd.	2,75,000	2,75,000	11th July 1898.	
<i>(d) Cotton and Jute Screws and Presses.</i>						
<i>(e) Other Mills and Presses.</i>						
<b>IV.—TEA AND OTHER PLANTING COMPANIES.</b>						
<i>(a) Tea.</i>						
39	23rd Nov. 1859	Bengal Tea Co., Ltd. ...	10,00,000	9,48,520	27th Oct. 1897	2nd Aug. 1898.
207	24th Jan. 1867	Kuttal Tea Co., Ltd. ...	1,00,000	1,00,000	16th Jan. "	14th Dec. "
218	15th Aug. 1868	New Mutual Tea Co., Ltd. ...	1,20,000	1,17,750	26th Feb. "	2nd Aug. "
236	4th April 1872	Central Torai Tea Co., Ltd. ...	4,00,000	4,00,000	6th Jan. 1899.	
278	10th Jan. 1874	Springdale Tea Co., Ltd. ...	1,68,000	1,68,000	27th Oct. 1897	2nd Aug. 1898.
293	1st Sept. "	Burkhola Tea Co., Ltd. ...	2,70,000	2,70,000	30th July "	29th June "
311	26th Feb. 1875	Second Mutual Tea Co., Ltd. ...	2,35,000	2,17,500	27th Oct. "	2nd Aug. "
392	8th Aug. 1879	Washahario Tea Co., Ltd. ...	1,50,000	1,60,000	6th Nov. "	14th Dec. "
398	14th Feb. 1880	Nahartoli Tea Co., Ltd. ...	1,60,000	1,60,000	19th July 1898.	
410	7th Feb. 1881	Ringtong Tea Co., Ltd. ...	3,00,000	2,00,000	16th June 1897	14th Dec. 1898.
500	19th July 1884	Tezpur and Gogra Tea Co., Ltd. ...	6,50,000	5,98,800	27th Oct. "	2nd Aug. "
516	22nd Dec. "	Mandakata Tea Co., Ltd. ...	2,00,000	2,00,000	10th June 1898.	
550	25th Feb. 1888	Jetinga Valley Tea Co., Ltd. ...	1,50,000	1,50,000	18th Nov. 1897	5th Nov. 1898.
558	17th July "	New Gloncoe Tea Co., Ltd. ...	3,00,000	3,00,000	6th "	14th Dec. "
616	19th July 1890	Lohagur Tea Co., Ltd. ...	2,10,000	2,10,000	23rd Oct. "	26th July "
716	16th Jan. 1892	Monabarric Tea Co., Ltd. ...	1,60,000	1,28,000	6th Nov. "	14th Dec. "
739	20th Dec. "	Central Duars Tea Co., Ltd. ...	4,00,000	4,00,000	16th June "	14th "
792	6th Nov. 1893	Sylhet-Tipperah Tea Co., Ltd. ...	5,00,000	3,98,750	11th "	14th "
794	20th "	British Sylhet Tea Co., Ltd. ...	2,00,000	2,00,000	29th April 1898	14th "
979	22nd Jan. 1895	Awwal Tea Co., Ltd. ...	15,000	10,000	6th "	
992	15th June "	Rhoni Tea Co., Ltd. ...	4,50,000	4,42,000	16th Dec. "	
1054	18th Jan. 1896	Jaintee Tea Co., Ltd. ...	4,00,000	.....	16th June 1897	14th Dec. 1898.
1207	7th Sept. "	Kollyden Tea Co., Ltd. ...	6,00,000	6,00,000	16th " 1898	6th Sept. "
<i>(b) Others.</i>						
637	6th Oct. 1890	Ramnugger Indigo Concern, Ltd.	1,40,000	1,40,000	14th June 1898.	

Number on the register.	Date of registration.	Classification and name of Company.	Nominal capital.	Paid-up capital.	Date of going into liquidation.	Date of final dissolution.
1	2	3	4	5	6	7
		<b>V.—MINING AND QUARRYING COMPANIES.</b>	<b>Rs.</b>	<b>Rs.</b>		
		(a) <i>Coal.</i>				
735	6th Dec. 1892	Burma Coal Co., Ltd. ...	7,50,000	7,49,750	7th Dec. 1898.	
972	27th Feb. 1895	Assam Coal Co., Ltd. ...	1,00,000	1,00,000	5th April "	30th Jan. 1899.
998	12th July "	Royalty Coal Syndicate, Ltd. ...	35,000	35,000	13th May "	15th Oct. 1898.
1044	21st Dec. "	Banjora Coal Co., Ltd. ...	40,000	40,000	18th Apl. "	
		(b) <i>Others.</i>				
		<b>VI.—ICE-MANUFACTURING COMPANIES.</b>				
		<b>VII.—SUGAR-MANUFACTURING COMPANIES.</b>				
		<b>VIII.—BREWERIES.</b>				
		<b>IX.—OTHER COMPANIES.</b>				
593	22nd Feb. 1890	Pioneer Glass Manufacturing Co., Ltd.	3,00,000	2,23,885	17th Mar. 1898	14th Mar. 1899.
722	18th May 1892	Indian Match Factory, Ltd. ...	70,000	47,240	16th Feb. 1897	6th April 1898.
734	2nd Nov. "	Indian Brating Gas Factories, Ltd.	2,00,000	.....	6th Jan. "	21st Sept. "

## No. VII.

*Companies limited by guarantee that having ceased to work, have gone into liquidation, or have been finally dissolved (or otherwise become defunct) during the year 1898-99.*

Number on the register.	Date of registration.	Classification and name of Company.	Number of members.	Date of going into liquidation.	Date of final dissolution.
1	2	3	4	5	6
		<b>I.—BANKING, LOAN AND INSURANCE COMPANIES.</b>			
		(a) <i>Banking and Loan Companies.</i>			
		(b) <i>Insurance Companies.</i>			
763	1st July 1893	Kurigram Mutual Helping Fund, Ltd.	1,200	5th August 1898	
820	13th February 1894	National Marriage Fund, Ltd.	5,000	26th " "	2nd December 1898.
968	23rd January 1895	Mrittinga Marriage Fund, Ltd.	6,000	.....	Defunct.
988	4th May "	Rangpur Parivarik Sahayya Simiti, Ltd.	1,200	.....	
1006	8th August "	Mogra Marriage Relief Fund, Ltd.	3,000	.....	
1009	12th " "	Mutual Nominee Relief Fund Co., Ltd.	2,500	.....	
1017	14th September "	Kulaghat Sulava Bibaha Bhandar Co., Ltd.	4,500	.....	
1020	20th " "	Mutual Co-operative Co., Ltd.	1,500	.....	4th November 1898
1030	30th October "	Shaptana Sulava Rin Sodha Sahayya Samiti, Ltd.	5,000	.....	
1040	4th December "	Khuningach Rin Sodha Fund Co., Ltd.	2,500	.....	Defunct.
1043	17th " "	Teesta Rin Sodha Fund Co., Ltd.	5,000	.....	
1067	27th January 1896	Khuningach Marriage Provision Fund, Ltd.	2,500	.....	
1061	6th February "	Teesta Marriage Provision Fund, Ltd.	3,000	.....	
1063	10th " "	Rangpur Mussalman Siksa Bibaha Mrita Byaktir Paribar Berger Sahayya Bhandar, Ltd.	Unlimited members.	.....	
1067	14th " "	Kholahati Bibaha Britti Bhandar, Ltd.	5,000	7th September 1898	
1091	13th April "	Chongadada Helping Fund, Ltd.	3,000	.....	Defunct.
1098	30th " "	Kurigram Rin Sodha Fund, Ltd.	3,000	.....	
1099	30th " "	Brahmani Kunda Marriage Fund, Ltd.	3,000	.....	
1131	19th June "	Rangpur Nawabganja Rin Sodha Fund, Ltd.	2,500	.....	

Number on the register.	Date of registration.	Classification and name of Company.	Number of members.	Date of going into liquidation.	Date of final dissolution.
1	2	3	4	5	6
		I.—BANKING, LOAN AND INSURANCE COMPANIES—concluded.			
		(b) Insurance Companies—concluded.			
1133	27th June 1896	Manibar Bibaha Rin Sodha Fund, Ltd.	Unlimited members.	.....	Defunct.
1134	1st July "	Beda Panga Rin Sodha Sahayya Co., Ltd.	3,000	.....	
1136	2nd " "	Payedadanga Sammilani Sahayya Co., Ltd.	Unlimited members.	.....	
1143	15th " "	Isvari Briddhasvari Sarva Jana Hitaisi Fund, Ltd.	3,000	.....	
1147	15th " "	Kholahati Bibaha Rin Kriai O Parivarik Sahayya Bhandar Co., Ltd.	Unlimited members.	.....	
1154	3rd August "	Mirzapur Marriage and Tin House Fund, Ltd.	Ditto ...	.....	
1158	5th " "	Haldi Badi Ghodamara Paribarik Sahayya Samiti, Ltd.	1,500	.....	
1170	12th " "	Khuniagach Kriai Sahayya Fund, Ltd.	3,000	.....	
1187	26th " "	Satjan Sahayya Bhandar, Ltd.	Unlimited members.	.....	
1224	16th September "	Patgram Rin Sodha Fund, Ltd.	3,000	5th August 1898	
1233	22nd " "	Jaorani Rinoddhar Bhandar Co., Ltd.	3,000	29th June "	Defunct.
1240	25th " "	Durgapur General Helping Fund, Ltd.	3,000	.....	
1257	7th October "	Digaltari Helping Fund, Ltd.	Unlimited members.	.....	
1293	28th November "	Buzrug Jhalai Prakasya Khandakarpada Bibaha Rin Tin Alankar Eban Kriai Karyyer Sahayya Bhandar Co., Ltd.	Ditto ...	.....	
1324	6th January 1897	Kholahati Rin Sahayya Bhandar, Ltd.	3,000	.....	
1328	13th " "	Congadada Family Provision Fund, Ltd.	1,500	.....	
1367	12th March "	Gayecerbari Rin Sodha Fund, Ltd.	2,500	.....	
		II.—TRADING COMPANIES.			
		(a) Merchants and Traders.			
		(b) Navigation.			
		(c) Railways and Tramways.			
		(d) Co-operative Associations.			
		(e) Shipping, Landing and Warehousing.			
		III.—MILLS AND PRESSES.			
		(a) Cotton Mills.			
		(b) Jute Mills.			
		(c) Mills for Cotton, Jute, Wool, Silk, Hemp, &c.			
		(d) Cotton and Jute Screens and Presses.			
		(e) Other Mills and Presses.			
		IV.—TEA AND OTHER PLANTING COMPANIES.			
		(a) Tea.			
		(b) Coffee and Cinchona.			
		(c) Others.			
		V. MINING AND QUARRYING COMPANIES.			
		VI.—ICE-MANUFACTURING COMPANIES.			
		VII.—SUGAR-MANUFACTURING COMPANIES.			
		VIII.—BREWERIES.			
		IX.—OTHER COMPANIES.			

## No. VIII.

## List of Joint Stock Companies at work on 31st March 1899.

Number on the register.	Date of registration.	Classification and name of Company.	Objects of Company.	Nominal capital.	Paid-up capital.	Situation of registered office.
1	2	3	4	5	6	7
		<b>I.—BANKING, LOAN, AND INSURANCE COMPANIES.</b>		<b>Rs.</b>	<b>Rs.</b>	
		<b>(a) Banking and Loan Companies.</b>				
221	7th April 1869	Hongkong and Shanghai Banking Corporation.	Banking business ...	2,25,00,000	2,25,00,000	No. 31, Dalhousie Square, South, Calcutta.
225	13th June 1870	Faridpur Loan Office, Ltd. ...	Ditto ...	20,000	19,820	Faridpur town.
226	25th Mar. 1871	Tippera Loan Office, Ltd. ...	Ditto ...	1,00,000	1,00,000	Gangaganj, Comilla, Tippera.
268	23rd Sept. 1873	Mymensingh Loan Office, Ltd.	Ditto ...	1,00,000	80,400	Mymensingh town.
270	17th Nov. "	Barisal Loan Office, Ltd. ...	Ditto ...	20,000	18,000	Barisal town.
301	5th " 1874	Bogra Loan Office, Ltd. ...	Ditto ...	20,000	13,310	Bogra town.
326	26th Sept. 1875	Nasirabad Loan Office, Ltd.	Ditto ...	50,000	28,180	Nasirabad town, Mymensingh.
338	12th April 1876	Jessore Loan Co., Ltd. ...	Lending money ...	1,20,000	1,00,000	Jessore town.
336	26th June "	Sahar Sarpur Loan Office, Ltd.	Ditto ...	20,000	16,170	Serpur town, Mymensingh.
342	29th July "	Munshiganj Loan Office, Ltd.	Ditto ...	20,000	12,060	Munshiganj, Dacca.
401	29th Mar. 1880	Dacca Loan Office, Ltd. ...	Ditto ...	2,00,000	1,39,060	Jindababargali, Dacca.
418	13th Aug. 1881	Sylhet Loan Co., Ltd. ...	Ditto ...	20,000	13,000	Sylhet town.
467	21st Feb. 1883	Chota Nagpur Banking Association, Ltd.	Banking business ...	50,000	38,990	Hazaribagh.
478	8th Aug. "	Pabna Bank, Ltd. ...	Lending money ...	20,000	18,780	Raghabpur, Pabna.
484	19th Sept. "	Kishorganj Loan Office, Ltd.	Ditto ...	50,000	40,000	Kishorganj, Mymensingh.
509	2nd Mar. 1885	Nonkhali Loan Office, Ltd. ...	Ditto ...	20,000	13,640	Nonkhali Sadar.
537	12th Feb. 1887	Tangail Loan Office, Ltd. ...	Ditto ...	50,000	40,910	Tangail, Mymensingh.
540	27th July "	Ghatail Sammilani Dhana Bhandar Co., Ltd.	Ditto ...	60,000	25,000	Ghatail station, Gopalpur, Mymensingh.
542	4th Aug. "	Kurigram Loan Office, Ltd.	Ditto ...	20,000	20,000	Madhapara, Kurigram, Rangpur.
546	15th Sept. "	Khulna Loan Co., Ltd. ...	Ditto ...	15,000	15,000	Khulna town.
553	2nd May 1888	Digh Pait Milita Dhana Bhandar Co., Ltd.	Ditto ...	1,00,000	32,000	Digh Pait, Jamalpur, Mymensingh.
574	23rd " 1889	Jalpaiguri Banking and Trading Corporation, Ltd.	Banking business ...	1,00,000	48,250	Jalpaiguri.
597	24th Mar. 1890	Bankipore Loan Office, Ltd.	Lending money ...	50,000	25,138	Bankipore, Patna.
728	22nd Aug. 1892	Bagirhat Loan Co., Ltd. ...	Ditto ...	10,000	10,000	Chandra Kanta Das' Place, Bagirhat.
743	23rd Feb. 1893	Madaripur Loan Office, Ltd.	Banking business ...	20,000	10,000	Town Madaripur, Faridpur.
826	27th " 1894	Rangpur Loan Office, Ltd. ...	Ditto ...	50,000	34,730	Nababganj, Rangpur.
907	26th July "	Nilphamari Loan Office, Ltd.	Ditto ...	20,000	20,000	Nilphamari, Rangpur.
959	20th Dec. "	Gaya Loan Office, Ltd. ...	Ditto ...	50,000	19,654	Gaya in Bihar.
960	29th " "	Bank of Calcutta, Ltd. ...	Ditto ...	15,00,000	10,00,000	No. 7, Clive Row, Calcutta.
962	15th Jan. 1895	India Debenture Co., Ltd. ...	Ditto ...	1,00,000	25,000	No. 5/8, Clive Street, Calcutta.
983	8th April "	Ghatail Loan and Insurance Co., Ltd.	Ditto ...	20,000	4,170	Ghatail, Tangail, Mymensingh.
1023	7th Oct. "	Cachar Land and Loan Corporation, Ltd.	Ditto ...	1,00,000	32,000	Vakilpara Road, Silchar, Cachar.
1116	29th May 1896	Investment and Finance Co., Ltd.	Banking and Loan business.	5,00,000	1,50,000	No. 1, Commercial Buildings, Calcutta.
1117	2nd June "	Koteswar Loan Co., Ltd. ...	Loan business ...	20,000	2,288	Singardabri, Barabari, Rangpur.
1128	18th " "	Kurigram Bank, Ltd. ...	Banking and Loan business.	20,000	14,020	Kurigram, Rangpur.
1187	8th July "	Bhawanipur Banking Corporation, Ltd.	Banking business ...	1,00,000	23,250	No. 86, Russa Road, North Bhawanipur, Suburbs of Calcutta.
1144	18th " "	Ulipur Loan Co., Ltd. ...	Lending money ...	20,000	14,050	Ulipur, Rangpur.
1278	10th Nov. "	Kulaghat Loan Office, Ltd. ...	Ditto ...	20,000	.....	Kulaghat, Barabari, Rangpur.
1282	28th " "	Sylhet National Co., Ltd. ...	Banking business, &c.	1,00,000	4,250	Chauhatta town, Sylhet.
1805	12th Dec. "	Kumarkhali Banking Corporation, Ltd.	Ditto ...	20,000	7,059	Jannaki Babu's Dispensary Building, Kumarkhali Bazar, Nadia.
1890	18th May 1897	Nagarpur India Loan Office, Ltd. "	Lending money ...	20,000	.....	Nagarpur, Tangail, Mymensingh.
1895	21st July "	Pabna Dhana Bhandar Co., Ltd.	Loan business ...	2,00,000	40,000	Dilalpur, Pabna.

Number on the register.	Date of registration.	Classification and name of Company.	Objects of Company.	Nominal capital.	Paid-up capital.	Situation of registered office.
1	2	3	4	5	6	
		I.—BANKING, LOAN AND INSURANCE COMPANIES— <i>contd.</i>		Rs.	Rs.	
		(a) <i>Banking and Loan Companies—concl'd.</i>				
1404	22nd Sept. 1897	Narandiya Nagarbari Daulatpur Dhana Bhandar Samiti, Ltd.	Loan business ...	20,000	.....	Narandia, Nagarbari, Mymensingh.
1406	17th Nov. "	Uluberia Loan Office Co., Ltd.	Ditto ..	20,000	9,664	Promises of Babu Yogendra Nath Mitra, Katak Road, Uluberia, Howrah.
1439	17th Oct. 1898	Pabna Model Co., Ltd. ...	Ditto ..	1,00,000	.....	Raghabpur, Pabna Town.
				2,07,55,000	2,47,77,843	
		(b) <i>Insurance Companies.</i>				
545	5th Sept. 1887	Triton Insurance Co., Ltd.	Insurance business	22,50,000	4,50,000	No. 4, Clive Row, Calcutta.
748	27th April 1893	Khulna Family Relief Association Co., Ltd.	Ditto ...	2,000	1,441	Khulna.
756	7th June "	Cachar Marine Fire Life Insurance and Banking Co., Ltd.	Marine, Fire, Life Insurance and Banking business.	1,00,000	27,945	Silchar, Cachar.
757	10th " "	Government Security Benevolent Fund, Ltd.	Life Insurance ...	96,000	1,303	Nos. 41, 42, 43, Sukea's Street, Calcutta.
760	17th " "	Chuckervartipara (Basabati) Mutual Pension Fund Co., Ltd.	Ditto ...	5,000	937	Asutosh Chakravarti's promises, Basabati, Khulna.
775	26th Aug. "	Bengal Pension Fund Co., Ltd.	Ditto ...	5,000	.....	No. 7, Madan Pal's Lane, Bhawanipur, Bagerhat, Khulna.
782	18th Sept. "	Bagerhat Family Pension Co., Ltd.	Ditto ...	500	.....	
783	25th " "	Indian Metropolitan Life Assurance Co., Ltd.	Ditto ...	1,00,000	2,586	No. 9, Hastings Street, Calcutta.
790	6th Oct. "	Baniaganti National Brothers Co., Ltd.	Ditto ...	375	303	Baniaganti, Bagerhat.
793	23rd Nov. "	Basabati Nagpara Helping Pension Fund, Ltd.	Ditto ...	500	.....	Basabati, Khulna.
796	12th Dec. "	Chitalmari Money Collecting Fund Co., Ltd.	Ditto ...	1,875	608	Chitalmari Bander, Khulna.
802	10th " "	Karamara Poor Relief Fund Co., Ltd.	Ditto ..	625	251	Karamara, Bagerhat, Khulna.
804	4th Jan. 1894	Birch Provident Fund Co., Ltd.	Ditto ...	500	97	Kuliadhair, Bagerhat, Khulna.
810	18th " "	Kartikdia Family Relief Fund Co., Ltd.	Ditto ...	1,000	.....	Kartikdia, Khulna.
819	12th Feb. "	Universal Children Relief Association, Ltd.	Ditto ...	469	128	Bagerhat, Khulna.
822	16th " "	Poor Family Relief Fund Co., Ltd.	Ditto ...	2,600	205	Baruikhali, Kachua, Khulna.
825	21st " "	Charkati Family Relief Co., Ltd.	Ditto ...	250	98	Charkati, Kachua, Khulna.
832	13th Mar. "	Maghia Universal Charitable Co., Ltd.	Ditto ...	1,250	.....	Maghia, Kachua, Khulna.
841	26th " "	Chingrakhal Poor Relief Co., Ltd.	Ditto ...	3,125	182	Chingrakhal, Khulna.
842	27th " "	Great National Family Supporting Fund Co., Ltd.	Ditto ...	3,125	.....	Maghia Barabati, Kachua, Khulna.
844	2nd April "	Bamorta Mutual Donation Co., Ltd.	Ditto ...	375	.....	Bamorta, Khulna.
847	10th " "	Ranmoti Benevolent Fund Co., Ltd.	Ditto ...	500	.....	Ranmoti, Barisal.
849	11th " "	Banagram Life Assurance Co., Ltd.	Ditto ...	875	.....	Banagram, Khulna.
851	16th " "	Daibajnahati Surhid Bhandar Co., Ltd.	Ditto ...	5,000	984	Daibajnahati, Khulna.
852	16th " "	Parmadhudia Poor Fund Co., Ltd.	Ditto ...	250	.....	Parmadhudia, Khulna.
853	16th " "	Sangdia National Relief Co., Ltd.	Ditto ...	938	93	Sangdia, Khulna.
856	23rd " "	Gopalpur Relief Fund Co., Ltd.	Ditto ...	375	125	Gopalpur, Kachua, Khulna.
857	23rd " "	Baitpur Fattehpur Union Pension Fund Co., Ltd.	Ditto ...	625	90	Baitpur, Bagerhat, Khulna.
861	4th May "	Kachua Daridrata Nibarani Fund Co., Ltd.	Ditto ...	1,100	226	Kachua, Khulna.
865	10th " "	Baniaganti Chakravartipara Relief Fund Co., Ltd.	Ditto ...	500	123	Baniaganti, Khulna.
867	11th " "	Nicopara Family Relief Fund Co., Ltd. (Uttorpara).	Ditto ...	250	68	Uttorpara, Khulna.
870	17th " "	Maghia Khalisakhal Family Pension Fund Co., Ltd.	Ditto ...	625	.....	Maghia, Khulna.
873	19th " "	Raghunathpur Family Marriage Co., Ltd.	Ditto ...	1,000	.....	Raghunathpur, Kachua, Khulna.



Number on the register.	Date of registration.	Classification and name of Company.	Objects of Company.	Nominal capital.	Paid-up capital.	Situation of registered office.
1	2	3	4	5	6	7
		I.—BANKING, LOAN AND INSURANCE COMPANIES— <i>contd.</i> (b) Insurance Companies— <i>contd.</i>		Rs.	Rs.	
877	21st May 1894	Rahimabad Helping Co., Ltd.	Life Insurance ...	750	89	Rahimabad, Khulna.
878	30th " "	Dobipur Family Relief Fund Co., Ltd.	Ditto ...	1,250	.....	Dobipur, Khulna.
879	4th June "	Muniganj Poor Fund Co., Ltd.	Ditto ...	375	48	Puratan Bazar, Bagerhat, Khulna.
885	14th " "	Durgapur Poor Supplying Fund Co., Ltd.	Ditto ...	500	.....	Durgapur, Khulna.
890	16th " "	Ghatak and Bosepara Mutual Provident Co., Ltd. (Baniaganti).	Ditto ...	125	.....	Baniaganti, Khulna.
891	18th " "	Muktoarpara Union Relief Co., Ltd. (Bagerhat).	Ditto ...	1,000	.....	Bagerhat, Khulna.
900	29th " "	Baulpur Mutual Relief Fund Co., Ltd.	Ditto ...	2,500	.....	Baulpur, Khulna.
902	17th July 1894	Banagram Bhattacharjopara Universal Helping Fund Co., Ltd.	Ditto ...	1,875	.....	Banagram, Khulna.
914	17th Aug. "	Kharamkhali Death, Birth and Marriage Fund Co., Ltd.	Ditto ...	1,000	.....	Kharamkhali, Khulna.
918	20th " "	Chupnagar Poor Family Relief Co., Ltd.	Ditto ...	500	64	Chupnagar, Khulna.
922	29th " "	Maheswarpasa Great Family Relief Co., Ltd.	Ditto ...	500	.....	Maheswarpasa, Khulna.
927	10th Sept. "	Umajuri Benevolent Fund, Ltd.	Ditto ...	1,750	.....	.....
937	31st Oct. "	Santoshpur Birth, Marriage, and Relief Fund Co., Ltd.	Ditto ...	750	.....	Santoshpur, Chittalmari P. O., Khulna.
956	19th Dec. "	Fuljhuri Sahayya Samiti Fund Co., Ltd.	Ditto ...	3,750	.....	.....
958	20th " "	Morelganj Family Relief Fund Co., Ltd.	Ditto ...	375	.....	Morelganj, Khulna.
982	5th April 1895	Tippera Jiban Bima Co., Ltd.	Ditto ...	12,000	960	Comilla, Gangaganj, Tippera.
1048	31st Dec. "	Barabari Rin Sodha Sahayya Co., Ltd.	Ditto ...	20,000	.....	Barabari K. D. Railway, Rangpur.
1072	21st Feb. 1896	Fagunda Jana Hitaisi Fund Co., Ltd.	Ditto ...	11,200	2,234	Fagunda, Barakanta P. O., Tippera.
1074	24th " "	Kalihat Bibaha Sahayya Co., Ltd.	Ditto ...	6,000	890	Kalihat, Tangail, Mymensingh.
1101	4th May 1896	Eastern Insurance Co., Ltd. ...	Life, Marine, accident, guarantee, and general assurance and insurance business.	50,00,000	.....	No. 4, Clive Row, Calcutta.
1132	26th June, "	Bhangamalli Sulabha Sahayya Bhandar, Ltd.	Life insurance ...	20,000	1,978	Bhangamalli Rangpur.
1212	8th Sept. "	Khetrai Sarvajana Hitaisi Sulabha Sahayya Bhandar, Ltd.	Ditto ...	4,000	.....	.....
1213	8th " "	Sindurmati Sarvajana Hitaisi Sahayya Bhandar, Ltd.	Ditto ...	5,000	.....	.....
1214	9th " "	Baugiya Sadharan Sansarik Sahayya Bhandar Co., Ltd.	Ditto ...	20,000	1,255	Danyabari, Jal-dhaka, Rangpur.
1215	9th " "	Nagar Singimari Sadharana Sahayya Bhandar Co., Ltd.	Ditto ...	10,000	.....	.....
1222	16th " "	Anantapur Sammilani Sahayya Bhandar, Ltd.	Ditto ...	20,000	.....	Anantapur, Nagesvari, Rangpur.
1241	25th " "	Tamvulpur Kalpataru Sahayya Bhandar Samiti Co., Ltd.	Ditto ...	10,000	1,064	Tamvulpur, Pir-gacha, Rangpur.
1248	1st Oct. "	Cakla Eastern Sarvartha Sadhika Sahayya Bhandar, Ltd.	Ditto ...	12,000	.....	.....
1268	30th " "	Tajhat Revenue Fund and General Relief Co., Ltd.	Ditto ...	6,250	.....	.....
1315	29th Dec. "	Nagesvari Krishna Kali Caturvidha Sahayya Co., Ltd.	Ditto ...	2,500	.....	Nagesvari, Rangpur.
1319	31st " "	Jolapada Sammilani Sahayya Co., Ltd.	Ditto ...	20,000	.....	.....
1320	31st " "	Badabhatta Sarvajana Hitaisi Sammilani Sahayya Bhandar Co., Ltd.	Ditto ...	20,000	.....	.....
1330	15th Jan. 1897	Mahisa Khaca O Govardhana Sulabha Sansarik Bhandar, Ltd.	Ditto ...	5,000	.....	.....
1335	23rd " "	Assam Marriage and Death Fund Co., Ltd.	Ditto ...	300	.....	Baranardi, Nal-bandi, Gaubati Assam.
1340	26th " "	Rangpur Municipality Sarvavidha Sahayya Co., Ltd.	Ditto ...	15,000	.....	.....

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1	2	3	4	5	6	7
		I.—BANKING, LOAN, AND INSURANCE COMPANIES— <i>concl'd.</i>		Rs.	Rs.	
		(b) Insurance Companies— <i>concl'd.</i>				
1357	19th Feb. 1897	Damurbhuda Paribarik Sans- than Co., Ltd.	Life insurance ...	9,000	.....	Dasomy, P. O. Da- murbhuda, Nadiya.
1361	5th Mar. "	Chatana Lakaminarayanapur Helping Fund Co., Ltd.	Ditto ...	5,000	2,218	Lakeminarayanpur Chatana, Banku- ra.
1363	8th " "	Kutavpur Artha Sahayya Fund Co., Ltd.	Ditto ...	20,000	395	Kutavpur, English Bazar, Malda.
1370	20th " "	Gosaganja Parasparik Sa- hayya Dan Co., Ltd.	Ditto ...	6,000	.....	Gosaganja, Dhubri, Goalpa- ra.
1372	1st April "	Nawabganja Upaya Bihin Sahayya Fund Co., Ltd.	Ditto ...	20,000	.....	Nawabganja, English Bazar, Malda.
1373	2nd " "	Machhari Sulabha Sahayya Samiti Co., Ltd.	Ditto ...	20,000	.....	.....
1374	5th " "	Naodanga Saravidha Sahay- ya Samiti, Ltd.	Ditto ...	6,000	.....	.....
1379	15th " "	Gangapur, (Bhelarpad) Dri- vidha Sahayya Universal Helping Fund Co., Ltd.	Ditto ...	20,000	.....	Gangapur, Ginta- man, Dinajpur.
1381	19th " "	Gala Sisu Pratipalan Loan Co., Ltd.	Life insurance and Loan business.	20,000	.....	Gala, Tangail, Mymensingh.
1387	10th May "	Putimari Sarvavidha Sahayya Bhandar, Ltd.	Life insurance ...	5,000	.....	Putimari, Mitha- pukur, Rangpur.
1388	11th " "	Sahidatta Dhubariya Mahat Uddesya Saphal Bhandar Co., Ltd.	Ditto ...	10,000	.....	Dhubariya, Na- garpur, Mymen- singh.
1405	27th Sept. "	Nazirpur Sarva Sadharana Hitaisi Fund Co., Ltd.	Ditto ...	6,000	472	Nazirpur, Malda.
1411	10th Jan. 1898	Konjakuda Hitaisi Sahayya Bhandar Co., Ltd.	Ditto ..	10,000	.....	Konjakurd, P. O. Chatna, Ban- kura.
1412	17th " "	Kancanpur Sadharana Hitaisi Co., Ltd.	Ditto ...	5,000	.....	Kancanpur, Chat- na, Bankura.
1413	28th " "	Gaurangadihi Sahayya Bhandar Co., Ltd.	Ditto ...	5,000	.....	Gaurangadihi, Manbhum.
1414	29th " "	Duvarajpur General Helping Fund Co., Ltd.	Ditto ...	5,000	.....	Duvarajpur, Chatna, Man- bhum.
1415	31st " "	Kamardi Radhakantapur Hitaisi Bhandar Co., Ltd.	Ditto ...	10,000	.....	Kamardi, Radha- kantapur, Chatna, Bankura.
1416	24th " "	Mejia Gopalganja Sadharana Sahayya Samiti Co., Ltd.	Ditto ...	15,000	...	Gopalganj, Gan- galghati, Ban- kura.
1418	11th Mar. "	Badra Manoranjan Sahayya Fund Co., Ltd.	Ditto ...	10,000	.....	Badra, Chatna, Bankura.
1419	11th " "	Kantasola Joint Stock Co., Ltd.	Ditto ...	5,000	.....	Kantasola, Chatna, Bankura.
1420	16th " "	Harmasda Mahada Sadha- rana Dayamocana Co., Ltd.	Ditto ...	5,000	.....	Harmasda, P. O. Taldangra, Ban- kura.
1430	15th Aug. "	Sayerbakhda Kriai Fund Sahayya Co., Ltd.	Ditto ...	5,000	.....	.....
				80,44,757	4,99,743	
			Total Banking, Loan and Insurance Companies.	3,47,99,757	2,52,77,586	
		II.—TRADING COMPANIES.				
		(a) Merchants and Traders.				
90	1st April 1863	R. Scott Thomson & Co., Ltd.	Carrying on business of chemists and druggists.	5,00,000	4,67,000	No. 15, Govern- ment Place, Cal- cutta.
274	18th Dec. 1878	Agricultural Phosphates Co., Ltd.	Manufacture of phos- phates.	1,00,000	85,000	No. 7, Church Lane, Calcutta.
411	7th Feb. 1881	Pingna Trading Co., Ltd. ...	General trade and lending money.	1,00,000	60,000	Pingna, Mymen- singh.
440	31st May 1882	Co-operative Pharmacy Co., Ltd.	Business of chemists and druggists.	50,000	32,000	No. 54, Sobha Bazar Street, Calcutta.
523	4th Feb. 1886	Great Eastern Hotel, Wine and General Purveying Co., Ltd.	Hotel-keepers and general dealers.	12,00,000	12,00,000	Nos. 1, 2, 3 and 4, Old Court House Street, Calcutta.
519	8th Dec. 1887	Indian Tea Supply Co., Ltd.	Dealers in Indian tea.	3,00,000	3,00,000	No. 25, Mangoe Lane, Calcutta.
556	15th June 1888	H. Dear & Co., Ltd. ...	Mercantile business	6,00,000	6,00,000	Nos. 5-8, Clive Street, Calcutta.
563	20th Feb. 1889	Chota Nagpur Carrying Co., Ltd.	Carrying passengers and goods from Ranchi.	20,000	8,080	Hazaribagh.
570	5th Mar. "	Kayastha Trading Co., Ltd.	General trade ...	20,000	9,110	Dumraon, Shaha- bad.

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		<b>II.—TRADING COMPANIES— contd.</b>		<b>Rs.</b>	<b>Rs.</b>	
		<b>(a) Merchants and Traders— concl.</b>				
684	7th Nov. 1889	Jessop & Co., Ltd. ...	Brass and iron foundries.	8,00,000	9,00,000	No. 93, Clive Street, Calcutta.
691	4th Feb. 1890	Rajshahi Dhanes Co., Ltd. ...	General trade ...	20,000	1,463	Laloro, Rajshahi.
698	8th Aug. 1891	Elysium Dramatic Co., Ltd. ...	To establish a theatre in the heart of the town.	3,00,000	1,76,723	No. 76, Russa Road, Calcutta.
702	10th Sept. "	Tangail Trading Co., Ltd. ...	General trade ...	50,000	8,880	Tangail, Mymensingh.
708	5th Dec. "	Behar Trading Co., Ltd. ...	Ditto ...	20,000	9,918	Bankipore Patna.
710	11th " "	John King & Co., Ltd. ...	Engineers and Contractors.	8,00,000	3,00,000	Victoria Engine Works, Howrah.
714	2nd Jan. 1892	Khulna Trading Co., Ltd. ...	General trade ...	50,000	1,484	Khulna Sadar.
716	18th " "	Kurigram Model Co., Ltd. ...	Stamp vendors and general traders.	20,000	20,000	Madhyapara, Kurigram, Rangpur.
720	25th Mar. "	Oriental Trading Co., Ltd. ...	Trade in timber ...	30,000	10,451	No. 187, Durrachatta Street, Calcutta.
729	1st Sept. "	Himalayan Trading Co., Ltd. ...	General trade ...	50,000	.....	
750	12th May 1893	India Publishers, Ltd. ...	Newspaper proprietary business.	1,26,000	26,000	No. 19, British Indian Street, Calcutta.
765	19th July "	East Bengal Joint Stock Co., Ltd. ...	General trade ...	20,000	.....	Muktagacha, Mymensingh.
807	10th Jan. 1894	Arrah Trading Co., Ltd. ...	Ditto ...	20,000	10,000	Arrah, Tangail, Mymensingh.
808	16th " "	Ayurvedic Medicine Manufacturing Co. of India, Ltd. ...	Manufacturing and selling Ayurvedic and other medicines.	20,000	13,760	Kalna, Burdwan.
858	24th April "	Parry & Co., Ltd. ...	Builders and Contractors.	8,00,000	8,00,000	No. 13, Garden Reach Road, Suburbs of Calcutta.
906	25th July "	Indian Imperial Financial Association, Ltd. ...	Brokers ...	50,000	46,500	No. 106, New China Bazar Street, Calcutta.
942	12th Nov. "	Jalpaiguri Club, Co. Ltd. ...	Amusements ...	75,000	50,620	Jalpaiguri.
965	11th Jan. 1895	Kinmond & Co., Ltd. ...	Builders and Contractors.	25,000	11,000	No. 14, Old Court House Street, Calcutta.
980	30th Mar. "	Burn & Co., Ltd. ...	Engineers, Builders, and Contractors.	25,00,000	18,00,000	No. 7, Hastings Street, Calcutta.
989	8th May "	Cachar Rice Supply Co., Ltd. ...	To prepare rice by mill and other agricultural business.	30,000	.....	Nunakhal Busti, Lal P. O., Cachar.
995	5th July "	Shalimar Works, Ltd. ...	Builders, Contractors, and Mechanical Engineers.	2,50,000	2,50,000	No. 6, Lyon's Range, Calcutta.
1011	20th Aug. "	Bharat Samiti, Ltd. ...	General trade ...	5,00,000	24,867	Silchar, Cachar.
1025	21st Oct. "	Woodlands Hotel Co., Ltd. ...	To establish hotel at Darjeeling.	1,20,000	.....	Woodlands Hotel, Darjeeling.
1027	24th " "	Chittagong Oriental Co., Ltd. ...	Carrying on the business of printing, etc.	10,000	2,400	Chaukbazar, Chittagong.
1031	11th Nov. "	Chota Nagpur Trading Co., Ltd. ...	General trade ...	20,000	14,980	Hazaribagh.
1032	5th " "	Sylhet Union Co., Ltd. ...	Ditto ...	20,000	3,410	Sylhet town.
1036	26th " "	Mrittinga Star Co., Ltd. ...	Ditto ...	20,000	3,207	Badabadi, Rangpur.
1040	5th Feb. 1896	Sylhet Trading Co., Ltd. ...	Ditto ...	1,00,000	3,640	Sylhet town.
1102	11th May "	Assam Valley Trading Co., Ltd. ...	General traders ...	20,000	13,715	Tezpur, Durrang, Assam.
1168	11th Aug. "	Wood Co., Ltd. ...	Dealers of all kinds of wood.	20,000	2,960	Kurseong Bazar, P. O. Kurseong, Darjeeling.
1226	17th Sept. "	Darjeeling Press Co., Ltd. ...	Printing and engraving, etc.	10,000	5,134	Mount Pleasant Road, Darjeeling.
1255	5th Oct. "	Berthoud & Co., Ltd. ...	To import and export all kinds of goods, produce, liquors, &c., &c.	1,00,000	13,000	Nos. 80/81, Bentinck Street, Calcutta.
1336	23rd Jan. 1897	Bengal Timber Trading Co., Ltd. ...	Trading in timber...	6,00,000	6,00,000	No. 4, Clive Row, Calcutta.
1354	17th Feb. "	Ranchi Trading Corporation, Ltd. ...	To trade in all goods and articles.	20,000	6,053	Town Ranchi, Lohardaga.
1359	24th " "	Estate Recovery Co., Ltd. ...	To carry on the business of agents.	10,600	10,150	No. 25, Mangoe Lane, Calcutta.
1385	5th May "	Eastern Bengal Mercantile Corporation, Ltd. ...	General traders ...	1,00,000	.....	Nagarpur, Tangail, Mymensingh.
1396	2nd Aug. "	Paul and Co., Ltd. ...	Engineers and General Contractors.	12,500	12,500	Santipur, Nadia.
1493	24th " "	Indian Publication Society, Ltd. ...	Publishers, &c. ...	20,000	---	No. 52/1, Harrison Road, Calcutta.
1590	6th Sept. "	Cachar Club, Co., Ltd. ...	Amusements, &c. ...	40,000	13,270	Silchar, Cachar.

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1	2	3	4	5	6	7
<b>II.—TRADING COMPANIES—<i>contd.</i></b>						
<b>(a) Merchants and Traders—<i>contd.</i></b>				<b>Rs.</b>	<b>Rs.</b>	
1400	7th Sept. 1897	Swadeshi Bhandar, Ltd. ...	General traders ...	20,000	.....	No. 82/1, Harrison Road, Calcutta.
1402	9th " "	Khunnah and Co., Ltd. ...	Merchants and commission agents.	50,000	.....	No. 60, Cross Street Calcutta.
1407	24th Nov. "	White Ribbon Co., Ltd. ...	To maintain a paper known as the "White Ribbon."	10,000	.....	.....
1410	5th Jan. 1898	Trotman and Co., Ltd. ...	General Merchants, &c.	1,60,000	.....	Dibrugarh, Assam.
1422	25th April "	Indian Co-operative Journal Society Ltd.	To publish newspapers.	20,000	.....	No. 82 Harrison Road Calcutta.
1425	21st May "	Atkinson Brothers, Ltd. ...	Trading in timber, stone, sand, &c.	3,00,000	.....	No. 13 Chowringhee Road, Calcutta.
1426	23rd " "	Anukhal Bandhava Banijjagar, Co. Ltd.	General traders ...	20,000	.....	Anukhal, Kalna, Burdwan.
1446	16th Feb. 1899	Chota Nagpur Timber and Trading Co. Ltd.	To carry on the business of timber-merchants, &c.	2,00,000	.....	.....
<b>(b) Navigation.</b>				1,05,69,000	74,32,055	
450	8th Nov. 1892	Calcutta Steam Navigation Co., Ltd.	Navigation in Bengal.	8,40,000	8,40,000	No. 38, Strand Road, Calcutta.
620	14th Aug. 1890	India General Steam Navigation Co., Ltd.	Conveying goods and passengers.	1,00,00,000	97,48,100	No. 4, Fairlie Place, Calcutta.
705	3rd Oct. 1891	Eastern Steam Navigation Co., Ltd.	Navigation business	3,00,000	.....	.....
1026	24th Oct. 1895	Bengal Assam Steamship Co., Ltd.	Ditto ...	15,00,000	8,00,000	No. 7, Clive Row, Calcutta.
<b>(c) Railways and Tramways.</b>				1,26,40,000	1,13,88,100	
286	10th April 1879	Darjeeling-Himalayan Railway Co., Ltd.	Constructing and working steam tramway.	17,50,000	17,50,000	No. 5/8, Clive Street, Calcutta.
425	30th Jan. 1882	Dooghur Railway Co., Ltd.	Constructing railway from Baidyanath to Dooghur.	2,75,000	2,75,000	No. 7, Hastings Street, Calcutta.
492	18th Feb. 1884	Tarakessur Railway Co., Ltd.	Constructing railway from Seoraphuli to Tarakessur.	17,50,000	17,50,000	No. 3/8, Strand Road, Calcutta.
597	15th Feb. 1889	Rangoon Steam Tramway Co., Ltd.	Constructing tramway in Rangoon.	7,50,000	6,00,000	No. 5/8, Clive Street, Calcutta.
613	23rd June 1890	Bengal Provincial Railway Co., Ltd.	Constructing railway from Tarakessur to Magra.	11,00,000	8,48,066	Magra, Hooghly.
788	2nd Oct. 1893	Tezpur-Balipara Tramway Co., Ltd.	Constructing tramway in Tezpur in Assam.	4,00,000	4,00,000	No. 31, Dalhousie Square, South.
987	2nd May 1895	Bengal District Road Tramways Co. (Howrah-Amra), Ltd.	Constructing tramways from Howrah to Amra.	9,00,000	8,96,660	Jackson House, No. 34, Jackson's Lane, Calcutta.
994	19th June "	Bengal District Road Tramways Co. (Howrah-Shoakhala), Ltd.	Constructing tramways from Howrah to Shoakhala.	5,40,000	5,28,900	Ditto ditto.
1046	27th Dec. "	Joyganj Railway Co., Ltd. ...	Constructing branch railway between Nilphamari and Joyganj.	2,50,000	.....	No. 44, European Asylum Lane, Calcutta.
1171	13th Aug. 1896	Sogowlio-Raksaul Branch Railway Co., Ltd.	Constructing a branch railway from Sogowlio to Raksaul.	10,00,000	9,95,775	No. 7, Clive Row, Calcutta.
1304	10th Dec. "	Ranaghat-Krishnagar Tramway Co., Ltd.	Constructing tramway between Ranaghat & Krishnagar.	7,00,000	90,900	Jackson's House, No. 34, Jackson's Lane, Calcutta.
1326	7th Jan. 1897	Brahmaputra-Sultanpur Branch Railway Co., Ltd.	Constructing railway from Sultanpur through Bogra to Kaliganj.	86,00,000	12,93,100	No. 2, Clive Ghat Street, Calcutta.
1366	12th Mar. "	Hardwar-Dehra Branch Railway Co., Ltd.	Constructing a branch railway from Hardwar to Dehra-Dun.	30,00,000	.....	.....
<b>(d) Co-operative Associations.</b>				1,60,15,000	93,67,801	
50	13th Feb. 1873	Assam E. I. R. Co-operative Society, Ltd.	Providing wines and spirits for the Railway employees.	10,000	10,000	Durand Road Assam, E. I. Ry.
263	25th May "	Buxar Co-operative Society, Ltd.	Selling wine, beer, and oilman's stores.	4,000	4,000	No. 2, Buxar Road, Buxar.

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		II.—TRADING COMPANIES— <i>concl.</i>		Rs.	Rs.	
		(d) Co-operative Associations <i>concl.</i>				
489	30th May 1882	Northern Bengal Railway Co-operative Supply Association, Ltd.	Supplying stores for the Railway employes.	11,400	11,400	Saidpur, N. B. Ry.
548	30th Nov. 1887	Asansol Railway Co-operative Ice and Aerated Water Supply, Ltd.	Supplying ice and aerated water for the Railway employes.	16,000	16,000	Ice House Tank, Asansol.
617	4th Aug. 1890	Jamalpur Co-operative Stores Association, Ltd.	Trade in co-operative stores.	8,000	6,857	Jamalpur, E. I. R.
685	10th July 1891	South Sylhet Supply Society, Ltd.	Ditto ...	12,000	12,000	Matiganj, South Sylhet.
786	28th Sept. 1893	Indian Pioneers Co., Ltd. ...	Ditto ...	20,000	7,670	No. 18, Shama Charan Do's Street, Calcutta.
984	18th April 1895	Samastipur Co-operative Stores Association, Ltd.	Ditto ...	5,000	5,000	Samastipur, Darbhanga.
1002	23rd July "	General Supply Stores Co., Ltd.	Co-operative business, to supply all articles of fooding and clothing.	18,000	6,380	Saidpur Bazar, Raugpur.
1431	17th Aug. 1898	Devereux and Co., Ltd. ...	Co-operative business to sell wine, &c.	1,00,000	.....	No. 4 Bankshall Street Calcutta.
1432	" "	Samuel Fitze and Co., Ltd. ...	Ditto ...	1,00,000	.....	Ditto.
				3,04,400	79,287	
		(e) Shipping, Landing, and Warehousing.				
114	7th Aug. 1863	Calcutta Landing and Shipping Co., Ltd.	Landing and shipping cargo.	5,00,000	5,00,000	No. 24, Strand Road, Calcutta.
120	15th Sept. "	Howrah Docking Co., Ltd. ...	Improvement of existing docks and buildings, and working others.	8,00,000	8,00,000	No. 5, Bentinck Street, Calcutta.
				13,00,000	13,00,000	
			Total of Trading Companies.	4,08,28,400	2,95,67,243	
		III.—MILLS AND PRESSES.				
		(a) Cotton Mills.				
128	9th Oct. 1863	Goosery Cotton Mills Co., Ltd.	Manufacturing cotton, twist, and cloth, &c.	15,00,000	15,00,000	No. 104, Clive Street, Calcutta.
244	7th Aug. 1872	Bowreah Cotton Mills Co., Ltd.	Spinning and weaving cotton.	18,00,000	18,00,000	No. 21, Strand Road, North, Calcutta.
854	19th April 1877	Empress of India Cotton Mills Co., Ltd.	Manufacturing cotton.	8,75,000	8,75,000	No. 55, Canning Street, Calcutta.
1127	15th June 1896	Sri Gungaji Cotton Mills Co., Ltd.	Spinning and manufacturing cotton.	10,00,000	2,76,250	Natwa behind Bihari Lal's Garden in Mirzapur.
1172	14th Aug. "	New Ring Mill Co., Ltd. ...	Spinning and weaving cotton.	9,00,000	6,00,000	No. 21, Strand Road, North, Calcutta.
1269	31st Oct. "	Bengal-Nagpur Cotton Mills Co., Ltd.	Ditto ...	6,00,000	6,00,000	No. 37, Clive Street, Calcutta.
1273	10th Nov. "	Dunbar Mills, Ltd. ...	Spinning and manufacturing cotton, &c.	50,00,000	14,00,000	No. 4, Fairlie Place, Calcutta.
1443	9th Nov. 1898	Serampore Cotton Mills, Ltd.	Spinning and weaving cotton.	9,00,000	.....	No. 37, Clive Street, Calcutta.
				1,25,75,000	70,51,250	
		(b) Jute Mills.				
361	28th Sept. 1877	Kamarhatty Co., Ltd. ...	Manufacturing and weaving jute.	16,00,000	15,50,500	No. 4, Clive Row, Calcutta.
405	5th Oct. 1880	Union Jute Co., Ltd. ...	Ditto ...	12,00,000	9,00,000	Ditto.
461	30th Dec. 1882	Kanknarrah Co., Ltd. ...	Ditto ...	17,50,000	9,10,000	Ditto.
585	28th Nov. 1889	Sibpur Jute Manufacturing Co., Ltd.	Spinning and weaving jute, &c.	17,50,000	10,00,000	No. 19, Radha Bazar Street, Calcutta.
619	8th Aug. 1890	Central Jute Mills Co., Ltd.	Ditto ...	7,00,000	7,00,000	No. 7, Clive Row, Calcutta.
625	18th Sept. "	Howrah Mills Co., Ltd. ...	Ditto ...	43,75,000	26,25,000	No. 9, Clive Row Calcutta.
627	24th " "	Fort Gloster Jute Manufacturing Co., Ltd.	Ditto ...	28,00,000	17,00,425	No. 21, Strand Road, North, Calcutta.
718	16th Mar. 1892	Hooghly Mills Co. Ltd. ...	Ditto ...	37,80,000	37,80,000	No. 51, Clive Street Calcutta.



**SUPPLEMENT TO THE CALCUTTA GAZETTE, JULY 26, 1899. 1263**

Number on the register.	Date of registration.	Classification and name of Company.	Objects of Company.	Nominal capital.	Paid-up capital.	Situation of registered office.
1	2	3	4	5	6	7
		<b>III.—MILLS AND PRESSES— contd.</b>		<b>Rs.</b>	<b>Rs.</b>	
		<i>(b) Jute Mills—concl'd.</i>				
725	1st Aug. 1892	Soorab Jute Mills Co., Ltd.	Spinning and weaving jute, &c.	7,00,000	7,00,000	No. 12, Jackson's Lane, Calcutta.
908	1st " 1894	Clive Mills Co., Ltd.	Ditto	11,00,000	10,76,420	No. 5, Clive Row, Calcutta.
940	8th Nov. "	Seraiganj Jute Co., Ltd.	Manufacturing jute, &c.	10,87,250	10,87,250	No. 7, Clive Row, Calcutta.
961	31st Dec. "	Budge-Budge Jute Mills Co., Ltd.	Ditto	27,00,000	26,97,600	Ditto ditto.
999	12th July 1895	Khurda Co., Ltd.	Spinning and weaving jute.	12,00,000	12,00,000	No. 22, Strand Road, Calcutta.
1013	30th Aug. "	Standard Jute Co., Ltd.	Ditto	13,00,000	10,84,000	No. 5, Clive Row, Calcutta.
1016	11th Sept. "	National Jute Mills Co., Ltd.	Ditto	10,00,000	10,00,000	No. 7, Clive Row, Calcutta.
1021	21st " "	Alliance Jute Mills Co., Ltd.	Ditto	11,00,000	11,00,000	No. 12, Mission Row, Calcutta.
1029	29th Oct. "	Gauripur Co., Ltd.	Manufacturing gunny bags.	35,00,000	18,96,630	No. 5, Lyon's Range, Calcutta.
1035	21st Nov. "	Shalimar Jute Co., Ltd.	Manufacturing and weaving jute, &c.	3,00,000	.....	.....
1409	27th Dec. 1897	Delta Jute Mills Co., Ltd.	Spinners and weavers of jute	12,00,000	7,20,500	No. 7, Clive Row, Calcutta.
				3,31,42,250	2,57,10,625	
		<i>(c) Mills for Cotton, Jute, Wool, Silk, Hemp, &amp;c.</i>				
415	20th June 1881	Bengal Silk Co., Ltd.	Spinning and weaving silk.	9,00,000	6,38,500	No. 25, Mangoe Lane, Calcutta.
741	25th Jan. 1893	Oriental Hosiery Manufacturing Co., Ltd.	Manufacturing thread from cotton, wool, silk, and other knitted articles.	2,00,000	48,052	No. 4, Clive Street, Calcutta.
1368	19th Mar. 1897	Bengal Silk Mills Co., Ltd.	Silk manufacturers	4,00,000	4,00,000	No. 5, Amratola Lane, Calcutta.
				15,00,000	10,81,552	
		<i>(d) Cotton and Jute Screens and Presses.</i>				
13	16th Sept. 1867	Nasmyth's Patent Press Co., Ltd.	Pressing cotton, jute, &c.	4,00,000	4,00,000	No. 10, Clive Row, Calcutta.
257	10th April 1873	Calcutta Hydraulic Press Co., Ltd.	Pressing and screwing cotton, jute, and jute cuttings.	2,20,000	2,20,000	No. 7, Clive Row, Calcutta.
280	25th Feb. 1874	Watson's Patent Press Co., Ltd.	Pressing and rolling jute, jute cuttings.	3,00,000	3,00,000	No. 100, Clive Street, Calcutta.
287	13th July "	Riverside Press Co. (Watson's Patent), Ltd.	Pressing and screwing cotton, jute, &c.	3,00,000	3,00,000	No. 1, Lall Bazar Street, Calcutta.
299	24th " "	Strand Bank Press Co. (Watson's Patent), Ltd.	Pressing jute, hides, &c.	2,50,000	2,50,000	No. 3, Commercial Buildings, Calcutta.
382	17th Mar. 1879	Chitpur Hydraulic Pressing Co., Ltd.	Pressing cotton, jute, and other materials.	4,00,000	4,00,000	No. 104, Clive Street, Calcutta.
430	20th Sept. 1881	Canal Press Co., Ltd.	Ditto	2,40,000	2,40,000	No. 7, Wellesley Place, Calcutta.
448	25th July 1882	Camperdown Pressing Co., Ltd.	Ditto	5,00,000	4,30,000	Ditto ditto.
490	18th Aug. 1883	India Pressing Co., Ltd.	Ditto	1,50,000	1,50,000	No. 5, New China Bazar Street, Calcutta.
791	7th Oct. 1893	Ghaziabad Pressing Co., Ltd.	Pressing jute, cotton, &c.	1,00,000	.....	.....
947	21st Jan. 1895	Pugh, Schollay & Co., Ltd.	Ditto	1,00,000	26,100	No. 37, Canning Street, Calcutta.
				29,60,000	26,96,100	
		<i>(e) Other Mills and Presses.</i>				
444	28th July 1882	Tytaghur Paper Mills Co., Ltd.	Manufacturing paper	15,00,000	10,00,000	No. 186, Canning Street, Calcutta.
583	22nd Oct. 1889	Sisai Saw Mills and Trading Co., Ltd.	Ditto	2,00,000	2,00,000	Sisai, Dibrughur, Assam.
587	18th Dec. "	Calcutta Flour Mills Co., Ltd.	Milling and preparing flour.	3,26,000	2,25,000	No. 31, Dalhousie Square, South, Calcutta.
600	23rd Jan. 1890	Bengal Paper Mills Co., Ltd.	Manufacturing paper	12,00,000	9,50,000	No. 103, Clive Street, Calcutta.
717	10th Feb. 1892	Imperial Paper Mills Co., Ltd.	Ditto	12,00,000	12,00,000	No. 4, Clive Row, Calcutta.

Number on the register.	Date of registration.	Classification and name of Company.	Objects of Company.	Nominal capital.	Paid-up capital.	Situation of registered office.
1	2	3	4	5	6	
		III.—MILLS AND PRESSES— —concl'd. (c) Other Mills and Presses— —concl'd.		Rs.	Rs.	
733	22nd Oct. 1892	Cachar Saw Mills and Trading Co., Ltd.	Saw and other mills for manufacturing oil, flour, &c.	50,000	.....	Silchar, Cachar.
744	10th Mar. 1893	Calcutta Roller Flour Mills Co., Ltd.	Manufacturing flour, oil, &c.	1,50,000	1,50,000	No. 1, Juggernath Dutt's Lane, Narikeldanga.
941	9th Nov. 1894	Howrah Flour Mills Co., Ltd.	Manufacturing flour, &c.	2,50,000	2,45,800	No. 7, Clive Row, Calcutta.
947	22nd „ „	Bengal Flour Mills Co., Ltd.	Ditto ditto ...	6,00,000	4,49,925	No. 108, Clive Street, Calcutta.
1022	5th Oct. 1895	Shalimar Mills Co., Ltd. ...	Mills for linseed, rapeseed, &c.	3,00,000	2,02,000	No. 38, Strand Road, Calcutta.
1033	11th Nov. „	Howrah Oil Mills Co., Ltd. ...	Manufacturing oil...	1,00,000	47,500	No. 7, Clive Row, Calcutta.
1161	25th Aug. 1896	Bengal Saw Mill Co., Ltd. ...	Saw millers ...	80,000	80,000	No. 100, Clive Street, Calcutta.
1339	26th Jan. 1897	Behar Machine Works Co., Ltd.	Working of flour mills and distillation of oil.	75,000	20,375	Chaubatta, Bankipur, Patna.
				60,30,000	47,70,600	
			Total Mills and Presses.	5,62,07,250	4,13,10,127	
		IV.—TEA AND OTHER PLANTING COMPANIES. (a) Tea.				
63	7th Aug. 1861	East India Tea Co., Ltd. ...	Cultivation of tea ...	10,00,000	10,00,000	No. 4, Mangoe Lane, Calcutta.
81	20th Nov. 1862	Soom Tea Co., Ltd. ...	Ditto ...	3,00,000	3,00,000	Ditto.
100	2nd May 1863	Central Cachar Tea Co., Ltd.	Ditto ...	10,00,000	10,00,000	No. 3, Mangoe Lane, Calcutta.
108	6th „ „	Bishnath Tea Co., Ltd. ...	Ditto ...	11,00,000	8,25,000	No. 4, Mangoe Lane, Calcutta.
111	15th July „	Eastern Cachar Tea Co., Ltd.	Ditto ...	7,00,000	7,00,000	No. 14, Old Court House Street, Calcutta.
137	12th Dec. „	Kurseong and Darjeeling Tea Co., Ltd.	Ditto ...	1,49,200	1,49,200	No. 3, Mangoe Lane, Calcutta.
139	4th Jan. 1864	Durrung Tea Co., Ltd. ...	Ditto ...	5,00,000	4,05,000	No. 4, Fairlie Place, Calcutta.
144	20th Feb. „	Tukvar Tea Co., Ltd. ...	Ditto ...	12,00,000	7,34,300	No. 4, Mangoe Lane, Calcutta.
212	8th Aug. 1867	Chandypore Tea Co., Ltd. ...	Ditto ...	2,50,000	2,50,000	No. 2, Commercial Buildings, Calcutta.
220	19th Jan. 1869	Arcuttipore Tea Co., Ltd. ...	Manufacturing tea	3,00,000	3,00,000	No. 7, Church Lane, Calcutta.
237	30th May 1871	Cutlacherra Tea Co., Ltd. ...	Ditto ...	2,70,000	2,60,000	No. 12, Mission Row, Calcutta.
233	15th Nov. „	Singell Tea Co., Ltd. ...	Ditto ...	6,25,000	6,25,000	No. 38, Strand Road, Calcutta.
237	23rd Mar. 1872	Hoolungeoree Tea Co., Ltd.	Ditto ...	4,00,000	4,00,000	No. 7, Clive Row, Calcutta.
242	15th July „	Dossai and Parbutia Tea Co., Ltd.	Ditto ...	1,80,000	1,80,000	No. 100, Clive Street, Calcutta.
251	27th Feb. 1873	Holta Tea Co., Ltd. ...	Ditto ...	3,50,000	3,50,000	No. 3/7, Clive Street, Calcutta.
265	23rd July „	Kalacherra Tea Co., Ltd. ...	Ditto ...	2,75,000	2,75,000	No. 14, Old Court House Street, Calcutta.
281	5th Mar. 1874	Mothola Tea Co., Ltd. ...	Cultivation of tea	1,50,000	1,38,000	No. 21, Strand Road, Calcutta.
292	7th Aug. „	Joonktolee Tea Co., Ltd. ...	Ditto ...	1,16,000	80,000	Ditto.
300	9th Oct. „	Phoenix Tea Co. (of Cachar), Ltd.	Ditto ...	6,25,000	5,35,000	No. 5, Lyon's Range, Calcutta.
306	5th Dec. „	Lackatoorah Tea Co., Ltd. ...	Ditto ...	4,00,000	4,00,000	No. 7, Church Lane, Calcutta.
312	6th Mar. 1875	Mim Tea Co., Ltd. ...	Ditto ...	1,60,000	1,59,000	No. 10, Clive Street, Calcutta.
314	5th „ „	Hoolmari Tea Co., Ltd. ...	Ditto ...	1,20,000	1,20,000	No. 4, Mangoe Lane, Calcutta.
316	1st May „	Sapakati Tea Co., Ltd. ...	Manufacturing tea...	88,000	88,000	No. 5, Lyon's Range, Calcutta.
317	3rd „ „	Rajabari Tea Co., Ltd. ...	Ditto ...	2,00,000	2,00,000	No. 4, Mangoe Lane, Calcutta.
330	25th Jan. 1876	North-Western Cachar Tea Co., Ltd.	Cultivation of tea ...	2,76,000	2,76,000	No. 21, Canning Street, Calcutta.
331	21st Feb. „	Runglee Rungliot Tea Co., Ltd.	Ditto ...	1,40,000	1,40,000	No. 6, Commercial Buildings, Calcutta.
341	25th July „	Amluckie Tea Co., Ltd. ...	Cultivation and manufacture of tea.	4,46,500	4,45,700	No. 12, Mission Row, Calcutta.

**SUPPLEMENT TO THE CALCUTTA GAZETTE, JULY 26, 1899. 1265**

Number on the register.	Date of registration.	Classification and name of Company.	Objects of Company.	Nominal capital.	Paid-up capital.	Situation of registered office.
1	2	3	4	5	6	7
		<b>IV.—TEA AND OTHER PLANTING COMPANIES—contd.</b>				
		<b>(a) Tea—contd.</b>		Rs.	Rs.	
845	31st Aug. 1876	Cachar Native Joint-Stock Co., Ltd.	Cultivation of tea ...	1,00,000	68,905	Silchar, Cachar.
847	20th Nov. "	Teesta Valley Tea Co., Ltd.	Ditto ...	3,50,000	3,20,000	No. 30, Dalhousie Square, South, Calcutta.
849	5th Jan. 1877	Dehing Co., Ltd.	Cultivation and manufacture of tea.	10,00,000	9,95,160	No. 21, Strand Road, Calcutta.
859	16th July "	Hotowar Tea Co., Ltd.	Cultivation of tea ...	56,000	56,000	Dorunda, in Chota Nagpur.
864	10th Jan. 1878	Singtom Tea Co., Ltd.	Cultivation and manufacture of tea.	1,60,000	1,60,000	No. 7, Clive Row, Calcutta.
868	12th July "	Hindu Tea Co., Ltd.	Cultivation of tea ...	24,500	24,500	Darjeeling.
878	27th Sept. "	Loobah Tea Co., Ltd.	Ditto ...	7,00,000	5,45,800	No. 14, Old Court House Street, Calcutta.
877	16th Jan. 1879	Longview Tea Co., Ltd.	Ditto ...	3,44,000	3,44,000	No. 4, Mangoe Lane, Calcutta.
878	16th " "	Darjeeling Tea and Cinchona Association, Ltd.	Cultivation of tea and cinchona.	2,00,000	2,00,000	No. 4, Fairlie Place, Calcutta.
890	29th May "	Jalpaiguri Tea Co., Ltd.	Cultivation of tea ...	50,000	50,000	Jalpaiguri.
897	5th Feb. 1880	Karnafuli Association, Ltd.	Ditto ...	3,60,000	3,00,000	No. 4, Fairlie Place, Calcutta.
413	30th Mar. 1881	Sungma Tea Co., Ltd.	Ditto ...	1,30,000	1,23,500	No. 1, Mangoe Lane, Calcutta.
427	15th Feb. 1882	Rungamatttee Tea Co., Ltd.	Ditto ...	1,75,000	1,75,000	No. 21, Canning Street, Calcutta.
437	25th April 1882	Ellonbarrie Tea Co., Ltd.	Cultivation and manufacture of tea.	1,50,000	1,50,000	Ditto, ditto.
448	5th Sept. "	Pashok Tea Co., Ltd.	Ditto ...	2,50,000	2,50,000	No. 4, Fairlie Place, Calcutta.
453	28th " "	Northern Bengal Tea Corporation, Ltd.	Ditto ...	1,00,000	85,400	Jalpaiguri.
458	2nd Dec. "	Gurjang Jhora Tea Co., Ltd.	Ditto ...	50,000	50,000	Ditto.
460	29th " "	Phulbari Tea Co., Ltd.	Ditto ...	5,12,000	5,12,000	No. 7, Hare Street, Calcutta.
464	17th Feb. 1883	Bagracote Tea Co., Ltd.	Ditto ...	4,50,000	4,50,000	No. 10, Hare Street, Calcutta.
466	19th " "	Baintgoorie Tea Co. (Duars)	Ditto ...	1,70,000	1,70,000	Ditto ditto.
474	11th July "	Bor Pukhuri Tea Co., Ltd.	Ditto ...	1,50,000	1,50,000	No. 4, Mangoe Lane, Calcutta.
498	28th May 1884	Kaliti Tea Co., Ltd.	Ditto ...	80,000	80,000	No. 14, Old Court House Street, Calcutta.
501	14th Aug. "	Iringmarrah Tea Co., Ltd.	Ditto ...	2,00,000	2,00,000	No. 100, Clive Street, Calcutta.
505	3rd Jan. 1885	Manabarrie Tea Co., Ltd.	Ditto ...	2,00,000	2,00,000	No. 21, Canning Street, Calcutta.
507	10th Feb. "	Nagadhoolie Tea Co., Ltd.	Ditto ...	1,76,000	1,76,000	No. 100, Clive Street, Calcutta.
508	23rd " "	Hopetown Tea Co., Ltd.	Ditto ...	1,00,000	1,00,000	No. 30, Dalhousie Square, South, Calcutta.
510	21st Mar. "	Hope Tea Co., Ltd.	Ditto ...	3,60,000	3,60,000	No. 21, Canning Street, Calcutta.
518	16th May "	Arya Tea Co., Ltd.	Cultivation of tea ...	59,990	59,990	Ditto ditto.
514	26th " "	New Cinnatollah Tea Co., Ltd.	Ditto ...	10,000	10,000	No. 3, Mangoe Lane, Calcutta.
517	22nd Dec. "	Chincoorie Tea Co., Ltd.	Ditto ...	2,00,000	2,00,000	Ditto ditto.
518	29th " "	Kilcott Tea Co., Ltd.	Ditto ...	2,00,000	2,00,000	No. 7, Hare Street, Calcutta.
519	5th Jan. 1886	Chulka Tea Co. (Duars), Ltd.	Ditto ...	5,40,000	5,40,000	No. 10, Hare Street, Calcutta.
520	5th " "	Zurantee Tea Co. (Duars), Ltd.	Ditto ...	1,90,000	1,90,000	Ditto ditto.
522	16th " "	Kallinagar and Khoreel Tea Co., Ltd.	Ditto ...	3,00,000	3,00,000	No. 3, Mangoe Lane, Calcutta.
530	26th June "	Shakomato Tea Co., Ltd.	Cultivation of tea, &c.	2,50,000	2,50,000	No. 4, Mangoe Lane, Calcutta.
533	29th July "	Chalouni Tea Co., Ltd.	Ditto ...	2,00,000	2,00,000	No. 21, Canning Street, Calcutta.
555	5th June 1888	Okayti Tea Co., Ltd.	Cultivation of tea	2,00,000	1,50,000	No. 30, Dalhousie Square, South, Calcutta.
559	2nd Aug. "	Carron Tea Co., Ltd.	Ditto ...	1,50,000	1,50,000	No. 21, Canning Street, Calcutta.
560	23rd " "	Nagaisauroe Tea Co., Ltd.	Ditto ...	2,40,000	2,40,000	Ditto ditto.
562	27th Sept. "	Gungaram Tea Co., Ltd.	Cultivation of tea, &c.	1,50,000	1,00,000	Ditto ditto.
572	27th March 1889	Huldebaree Tea Association, Ltd.	Cultivation of tea ...	3,00,000	2,00,000	No. 30, Dalhousie Square, South, Calcutta.
578	24th June "	New Chumta Tea Co., Ltd.	Ditto ...	1,00,000	1,00,000	Ditto ditto.
580	15th Aug. "	Anjuman Tea Co., Ltd.	Ditto ...	2,25,000	2,25,000	Jalpaiguri.
604	14th May 1890	Gairkhata Tea Co., Ltd.	Ditto ...	2,50,000	2,50,000	No. 7, Church Lane, Calcutta.
609	9th June "	Jhiringhat Native Tea Co., Ltd.	Ditto ...	20,000	20,000	Silchar

Number on the register.	Date of registration.	Classification and name of Company.	Objects of Company.	Nominal capital.	Paid-up capital.	Situation of registered office.
1	2	3	4	5	6	7
		IV.—TEA AND OTHER PLANTING COMPANIES— <i>contd.</i>		Rs.	Rs.	
		(a) <i>Tea—contd.</i>				
612	21st June 1890	Tyroon Tea Co., Ltd. ...	Cultivation of tea ...	1,00,000	1,00,000	No. 12, Mission Row, Calcutta.
628	25th Sept. "	Altadanga Tea Co., Ltd. ...	Ditto ...	80,000	29,280	Jaipalguri.
633	30th " "	Naddia Tea Co., Ltd. ...	Ditto ...	1,00,000	84,400	Anila, Sadarpur P. O., Nadia.
688	10th April 1891	Atal Tea Co., Ltd. ...	Ditto ...	2,25,000	2,25,000	No. 81, Dalhousie Square, South, Calcutta.
687	5th May "	Pahargoomiah Tea Association, Ltd.	Cultivation of tea, &c.	2,00,000	2,00,000	No. 4, Fairlie Place, Calcutta.
693	8th June "	Chamurchi Tea Co., Ltd. ...	Ditto ...	75,000	75,000	Jaipalguri.
704	24th Sept. "	Killing Valley Tea Association, Ltd.	Ditto ...	1,30,000	1,30,000	No. 5, Lyon's Range, Calcutta.
706	23rd Oct. "	Nurbong Tea Co., Ltd. ...	Ditto ...	1,80,000	1,80,000	No. 31, Dalhousie Square, South, Calcutta.
742	4th Feb. 1893	Tilkah Tea Co., Ltd. ...	Cultivation of tea ...	40,000	20,000	No. 68, Strand Road, Calcutta.
745	6th April "	Thornajan Tea and Saw Mills Co., Ltd.	Planting tea, &c. ...	1,00,000	1,00,000	No. 30, Dalhousie Square, South, Calcutta.
753	20th May "	Rajnagar Tea Co., Ltd. ...	Cultivation of tea, &c.	4,00,000	3,20,000	No. 3/7, Clive Street, Calcutta.
754	2nd June "	Chota Nagpur Tea Co., Ltd. ...	Ditto ...	85,000	75,000	Ditto ditto.
762	29th June "	Baradighi Tea Co., Ltd. ...	Ditto ...	3,00,000	3,00,000	No. 4, Clive Row, Calcutta.
818	9th Feb. 1894	Dum-Duma Jhar Tea Co., Ltd.	Cultivation and manufacture of tea.	60,000	60,000	Darjeeling.
823	16th " "	Choonabhutti Tea Co., Ltd.	Ditto ...	2,00,000	2,00,000	No. 7, Clive Row, Calcutta.
884	17th Mar. "	Hatti Khira Tea Co., Ltd. ...	Ditto ...	2,00,000	6,00,000	No. 14, Old Court House Street, Calcutta.
888	16th June "	Chand Khira Tea Co., Ltd. ...	Ditto ...	2,50,000	2,50,000	Ditto ditto.
925	5th Sept. "	Geille Tea Co., Ltd. ...	Ditto ...	4,00,000	4,00,000	No. 30, Dalhousie Square, Calcutta.
936	2nd Oct. "	Putinbaree Tea Co., Ltd. ...	Ditto ...	15,000	15,000	No. 88/3, Clive Street, Calcutta.
949	1st Dec. "	Assam United Tea Co., Ltd.	Ditto ...	4,00,000	4,00,000	No. 7, Clive Row, Calcutta.
950	1st " "	Chundee Cherra Tea Co., Ltd.	Ditto ...	3,00,000	3,00,000	No. 14, Old Court House Street, Calcutta.
951	3rd " "	Punkabaree Tea Co., Ltd. ...	Ditto ...	1,50,000	1,47,500	No. 30, Dalhousie Square, South, Calcutta.
963	7th Jan. 1895	Grob Tea Co., Ltd. ...	Ditto ...	5,00,000	5,00,000	No. 14, Old Court House Street, Calcutta.
966	18th " "	South Cachar Tea Co., Ltd.	Ditto ...	1,40,000	1,40,000	No. 12, Mission Row, Calcutta.
973	1st Mar. "	Selim Hill Tea Co., Ltd. ...	Ditto ...	3,00,000	3,00,000	No. 7, Clive Row, Calcutta.
975	9th " "	Nahorjan Tea Co., Ltd. ...	Ditto ...	1,00,000	1,00,000	No. 14, Old Court House Street, Calcutta.
977	14th " "	Samanbagh Tea Co., Ltd. ...	Ditto ...	2,50,000	2,50,000	No. 3/7, Clive Street, Calcutta.
985	18th April "	Engo Tea Co., Ltd. ...	Ditto ...	1,20,000	1,20,000	No. 7, Clive Row, Calcutta.
993	18th June "	Banarhat Tea Co., Ltd. ...	Ditto ...	5,00,000	4,98,125	Ditto ditto.
1001	17th July "	Toliapara Tea Co., Ltd. ...	Ditto ...	3,00,000	2,09,478	No. 21, Canning Street, Calcutta.
1004	30th " "	Bhutan-Duars Tea Co., Ltd.	Ditto ...	4,00,000	3,48,300	No. 5, Lyon's Range, Calcutta.
1015	10th Sept. "	Hasimara Tea Co., Ltd. ...	Ditto ...	8,50,000	6,88,081	Ditto ditto.
1018	16th " "	Koddom Tea Co., Ltd. ...	Ditto ...	100,000	50,000	No. 4, Mangoe Lane, Calcutta.
1024	14th Oct. "	Katalguri Tea Co., Ltd. ...	Ditto ...	75,000	61,150	Jaipalguri town.
1041	14th Dec. "	Birpara Tea Co., Ltd. ...	Ditto ...	7,50,000	4,04,360	No. 21, Canning Street, Calcutta.
1049	11th Jan. 1896	Phaskowa Tea Co., Ltd. ...	Ditto ...	2,50,000	2,00,000	Ditto ditto.
1096	11th Feb. "	Kamar-Koochee Tea Co., Ltd.	Ditto ...	50,000	85,000	No. 1, Mangoe Lane, Calcutta.
078	21st " "	Deckajulli Tea Co., Ltd. ...	Ditto ...	60,000	60,000	No. 31, Dalhousie Square, Calcutta.
077	14th Mar. "	Chundawa Tea Co., Ltd. ...	Ditto ...	6,00,000	2,70,000	No. 5, Lyon's Range, Calcutta.
1083	31st " "	Manjha Tea Co., Ltd. ...	Ditto ...	80,000	24,000	Darjeeling.
1029	10th April "	Indeewar Tea and Trading Co., Ltd.	Cultivation of tea and other agricultural business.	1,00,000	40,840	Sylhet town.
1093	20th April "	Chuniajhora Tea Co., Ltd. ...	Cultivators and manufacturers of tea.	75,000	68,862	Jaipalguri town.
1107	18th May "	Doolahat Tea Co., Ltd. ...	Ditto ...	1,80,000	1,51,600	No. 4, Mangoe Lane, Calcutta.
1148	24th July "	Harmutty Tea Co., Ltd. ...	Ditto ...	4,00,000	3,83,450	Ditto ditto.

Number on the register.	Date of registration.	Classification and name of Company.	Objects of Company.	Nominal capital.	Paid-up capital.	Situation of registered office.
1	2	3	4	5	6	7
IV.—TEA AND OTHER PLANTING COMPANIES— <i>conold.</i>				Rs.	Rs.	
(a) <i>Tea—conold.</i>						
1242	24th July 1896	Hantapara Tea Co., Ltd. ...	Cultivators and manufacturers of tea.	4,50,000	3,45,300	No. 21, Canning Street, Calcutta.
1270	2nd Nov. "	Pabbojon Tea Co., Ltd. ...	Ditto ...	2,48,000	2,12,255	Debrugarh, Assam.
1298	24th " "	Potong Tea Co., Ltd. ...	Ditto ...	2,00,000	27,175	No. 30, Dalhousie Square, South, Calcutta.
1351	2nd Feb. 1897	Burra Chenga Tea Co., Ltd.	Ditto ...	58,000	31,400	No. 83/3, Clive Street, Calcutta.
1362	8th Mar. "	Oodlabari Tea Co., Ltd. ...	Ditto ...	1,00,000	40,000	No. 14, Old Court House Street Calcutta.
1365	10th " "	Kingsley-Golaghat-A s s a m Tea Co., Ltd.	Cultivators and manufacturers of tea, coffee, &c.	4,80,000	4,50,000	No. 8, Clive Street Calcutta.
1389	18th May 1897	New Doears Tea Co., Ltd. ...	Cultivators and manufacturers of tea.	1,50,000	88,075	No. 7, Clive Row, Calcutta.
1391	29th " "	Tingalibam Co., Ltd. ...	Ditto ...	2,50,000	57,150	No. 12, Mission Row, Calcutta.
1403	21st Sept. "	Mowdie Hill Tea Co., Ltd. ...	Ditto ...	50,000	.....	No. 16, Strand Road, Calcutta.
1417	24th Feb. 1898	Rydat Tea Co., Ltd. ...	Ditto ...	4,00,000	95,625	No. 5, Lyon's Range, Calcutta.
1423	30th April "	Rangmala Tea Co., Ltd. ...	Ditto ...	60,000	.....	No. 3 and 4 Hare Street, Calcutta.
1427	26th May "	Lohaghur Tea Co., Ltd. ...	Ditto ...	1,00,000	.....	No. 14 Old Court House Street, Calcutta.
1434	29th Aug. "	Dhooasam Tea Co., Ltd. ...	Ditto ...	2,40,000	.....	Dibrugarh, Assam.
1448	18th Mar. 1899	Simul Bari Tea Co., Ltd. ...	Ditto ...	50,000	.....	.....
1449	22nd " "	Kodala Tea Co., Ltd. ...	Cultivators and manufacturers of tea, coffee, &c.	60,000	.....	Kodala, Chittagong.
(b) <i>Others.</i>				8,51,49,100	3,04,69,801	
322	29th June 1875	Sylhet Cultivating Co., Ltd.	Agriculture ...	20,000	17,275	Panchas, Sylhet.
630	30th Sept. 1890	Patkoom Indigo and Trading Co., Ltd.	Planting indigo ...	2,25,000	2,25,000	No. 4, Clive Row, Calcutta.
809	17th Jan. 1894	Indian Husbandry Co., Ltd.	Cultivating paddy, jute, vegetable, &c.	1,00,000	.....	.....
989	5th Nov. "	Saran Co., Ltd. ...	Planting and manufacturing indigo.	2,40,000	2,40,000	No. 12, Mission Row, Calcutta.
1424	17th May 1898	Chandpur Co., Ltd. ...	Ditto ...	7,32,500	.....	No. 7 Hare Street, Calcutta.
Total Tea and other Planting Companies.				13,17,500	4,82,275	
V.—MINING AND QUARRYING COMPANIES.				3,64,66,890	3,09,52,076	
(a) <i>Coal.</i>						
20	24th July 1858	Bengal Coal Co., Ltd. ...	Mining coal ...	24,00,000	24,00,000	No. 10/1, Old Court House Street, Calcutta.
255	8th April 1873	Raniganj Coal Association, Ltd.	Ditto ...	9,00,000	8,25,000	No. 4, Fairlie Place, Calcutta.
262	6th May "	New Birbhum Coal Co., Ltd.	Ditto ...	7,20,000	7 20,000	No. 103, Clive Street, Calcutta.
320	19th June 1875	Burrakur Coal Co., Ltd. ...	Ditto ...	8,00,000	3,00,000	No. 4, Clive Row, Calcutta.
592	8th Feb. 1890	Damuda Coal Co., Ltd. ...	Ditto ...	6,00,000	5,45,500	No. 5/6, Hare Street, Calcutta.
660	18th Dec. "	Bengal-Nagpur Coal Co., Ltd.	Ditto ...	2,25,000	2,25,000	No. 21, Canning Street, Calcutta.
670	10th Feb. 1891	Borrea Coal Co., Ltd. ...	Ditto ...	9,00,000	9,00,000	No. 136, Canning Street, Calcutta.
730	2nd Sept. 1892	South Burrakur Coal Co., Ltd.	Ditto ...	5,00,000	5,00,000	No. 100, Clive Street, Calcutta.
731	17th " "	Baraboni Coal Co., Ltd. ...	Ditto ...	2,00,000	1,99,800	No. 57, Cotton Street, Calcutta.
769	4th Aug. 1893	Katrae-Jheria Coal Co., Ltd.	Ditto ...	5,00,000	4,99,695	No. 7, Clive Row, Calcutta.
771	14th " "	Adjai Coal Co., Ltd. ...	Ditto ...	3,50,000	3,49,875	Ditto ditto.
912	6th Aug. 1894	Banali Coal Co., Ltd. ...	Ditto ...	1,00,000	.....	No. 7, Swallow Lane, Calcutta.
945	19th Nov. "	Giridih Colliery Co., Ltd. ...	Ditto ...	1,80,000	1,80,000	Giridih.
970	25th Jan. 1895	Singaran Coal Syndicate, Ltd.	Ditto ...	3,50,000	3,50,000	No. 31, Dalhousie Square, South, Calcutta.
276	12th Mar. "	Equitable Coal Co., Ltd. ...	Ditto ...	12,00,000	12,00,000	No. 1/2, Clive Ghat Street, Calcutta.



Number on the register.	Date of registration.	Classification and name of Company.	Objects of Company.	Nominal capital.	Paid-up capital.	Situation of registered office.
1	2	3	4	5	6	7
		V.—MINING AND QUARRYING COMPANIES—conclud.		Rs.	Rs.	
		(a) Coal—concluded.				
996	5th July 1895	Jhorria Colliery Co., Ltd. ...	Mining coal	2,00,000	2,00,000	No. 38, Strand Road, Calcutta.
1010	15th Aug. "	Victoria Coal Mining Co., Ltd.	Ditto	1,00,000	9,500	Konnagar, Hooghly.
1075	26th Feb. 1896	Shampore Coal Co., Ltd. ...	Ditto	3,00,000	3,00,000	No. 100, Clive Street, Calcutta.
1078	29th " "	Khasiamara Syndicate, Ltd.	Ditto	3,50,000	.....	No. 5, Lyon's Range, Calcutta.
1087	9th April "	Kankanee Coal Co., Ltd. ...	Ditto	1,00,000	.....	No. 41, Strand, Rajah Wood-mant's Street, Calcutta.
1094	21st " "	Great Eastern Coal Co., Ltd.	Ditto	5,00,000	5,00,000	No. 7/1, Lyon's Range, Calcutta.
1112	23rd May "	Sitarampore Coal Co., Ltd.	Ditto	3,00,000	2,11,000	No. 25, Mangoo Lane, Calcutta.
1129	18th June "	New Manbhum Coal Co., Ltd.	Ditto	3,00,000	2,20,815	No. 14, Old Court House Street, Calcutta.
1169	12th Aug. "	Reliance Coal Co., Ltd. "	Ditto	6,00,000	2,00,000	No. 5, Clive Row, Calcutta.
1358	19th Feb. 1897	Ondal Coal Co., Ltd. ...	Ditto	9,00,000	6,00,000	No. 136, Canning Street, Calcutta.
1393	15th July "	Daling Coal Co., Ltd. ...	Miners of coal	2,00,000	2,00,000	No. 14, Old Court House Street, Calcutta.
1408	20th Dec. "	Taara Coal Co., Ltd. ...	Ditto	4,00,000	3,00,000	No. 4, Clive Row, Calcutta.
1428	7th June 1898	Royalty Coal Syndicate, Ltd.	Mining coal	1,40,000	.....	No. 38 Stand Road Calcutta.
1438	23rd Aug. "	Nandi Coal Co., Ltd. ...	Ditto	51,000	.....	
1437	14th Oct. "	Chota Nagpur Coal and Mica Mining Co., Ltd.	Mining coal and mica.	20,000	.....	Giridih, Hazari-bagh.
1441	1st Nov. "	Nowagbur Coal Co., Ltd. ...	Mining coal	6,12,000	.....	
1442	1st " "	Lutehipur Coal Co., Ltd. ...	Ditto	6,12,000	.....	
				1,51,10,000	1,19,36,185	
		(b) Others.				
339	30th June 1876	Rajmahal Stone Co., Ltd. ...	Mining stone	2,50,000	2,50,000	No. 13, Chowringhee Road, Calcutta.
381	15th Feb. 1879	Bengal Stone Co., Ltd. ...	Ditto	80,000	80,000	No. 100, Clive Street, Calcutta.
766	20th July 1893	Sutna Stone and Lime Co., Ltd.	Mining and quarrying stone, lime, &c.	48,000	48,000	No. 101, Clive Street, Calcutta.
614	27th June 1890	Kharsawan Gold Syndicate, Ltd.	Prospecting and mining.	2,00,000	1,65,000	No. 4, Fairlie Place, Calcutta.
618	8th Aug. "	Western Bengal Prospecting Syndicate, Ltd.	Ditto	5,50,000	5,15,000	No. 7, Church Lane, Calcutta.
621	30th " "	Bengal Gold and Silver Mining Co., Ltd.	Ditto	16,00,000	12,26,350	Ditto ditto.
623	4th Sept. "	Sonepur Proprietary Gold Mining Co., Ltd.	Ditto	17,24,000	17,24,000	No. 136, Canning Street, Calcutta.
629	27th " "	Dumra Gold Prospecting Syndicate, Ltd.	Ditto	5,55,500	5,55,500	No. 5, Lyon's Range, Calcutta.
650	5th Nov. "	Excelsior Land and Prospecting Syndicate, Ltd.	Ditto	1,50,000	.....	No. 60, Cross Street, Calcutta.
657	29th " "	Palkanj Gold Prospecting Syndicate, Ltd.	Ditto	3,00,000	3,00,000	No. 5/8, Clive Street, Calcutta.
685	22nd Jan. 1891	Sonepur Syndicate, Ltd. ...	Ditto	60,000	47,888	No. 14, Old Court House Street, Calcutta.
667	28th " "	Barabhum Co., Ltd. "	Ditto	32,000	32,000	No. 38, Strand Road, Calcutta.
673	24th Feb. "	Sonapahar Gold Prospecting and Mining Co., Ltd.	Ditto	6,00,000	4,78,410	No. 3/7, Clive Street, Calcutta.
676	10th Mar. "	Pacheta Trading Corporation, Ltd.	Ditto	5,00,000	4,00,000	Ditto ditto.
677	21st " "	Rajdoha Mining Co., Ltd. ...	Ditto	25,00,000	7,41,724	No. 8, Clive Street, Calcutta.
682	6th April "	Singhbhum Mining and Prospecting Syndicate, Ltd.	Ditto	1,00,000	.....	No. 14, Old Court House Street, Calcutta.
699	18th Aug. "	Kallyanpur Bihar Gold Mining Co., Ltd.	Ditto	9,00,000	.....	No. 26, Strand Road, Calcutta.
749	4th May 1893	Amda Mining Co., Ltd. "	Ditto	2,00,000	75,000	No. 4, Fairlie Place, Calcutta.
981	5th April 1895	Kora Iron Stone Syndicate, Ltd.	Ditto	1,25,000	38,200	No. 38, Clive Street, Calcutta.
1329	15th Jan. 1897	Hazaribagh Mica Mining Co., Ltd.	Mining mica	20,000	.....	
1444	20th Dec. 1896	Sylhet Lime Co., Ltd. ...	Mining and quarrying lime.	1,00,000	.....	No. 4 Fairlie Place, Calcutta.
				1,05,94,500	66,72,022	
		Total of Mining and Quarrying Companies.		2,57,04,500	1,86,08,207	

**SUPPLEMENT TO THE CALCUTTA GAZETTE, JULY 26, 1899. 1269**

Number on the register.	Date of registration.	Classification and name of Company.	Objects of Company.	Nominal capital.	Paid-up capital.	Situation of registered office.
1	2	3	4	5	6	7
VI.—ICE-MANUFACTURING COMPANIES.						
367	9th July 1878	Bengal Ice-manufacturing Co., Ltd.	Manufacturing ice ...	Rs. 5,00,000	Rs. 5,00,000	No. 103, Clive Street, Calcutta. Jamalpur, E. I. R.
389	28th May 1879	Jamalpur Ice-manufacturing Co., Ltd.	Ditto	18,254	17,800	
481	14th Aug. 1883	Crystal Ice Supply Co., Ltd.	Ditto ...	2,00,000	2,00,000	
656	22nd Nov. 1890	Oriental Ice-manufacturing Co., Ltd.	Ditto ...	1,00,000	44,300	
721	6th April 1892	Dacca Ice Co., Ltd.	Ditto ...	5,000	4,070	
1386	7th May 1897	Naraingunge Aerated Water Co., Ltd.	Ditto ...	10,000	8,500	Dacca. Naraingunge, Dacca.
Total of Ice-manufacturing Companies.				8,33,254	7,74,670	
VII.—SUGAR-MANUFACTURING COMPANIES.						
319	11th June 1875	Carow & Co., Ltd.	Manufacturing sugar.	16,00,000	16,00,000	No. 25, Mangoe Lane, Calcutta. No. 100, Clive Street, Calcutta.
1421	13th Mar. 1898	Sakri Sugar Refinery and Distillery Co., Ltd.	Ditto ...	5,00,000	.....	
				21,00,000	16,00,000	
VIII.—BREWERIES.						
IX.—OTHER COMPANIES.						
470	14th Mar. 1883	Bengal Telephone Co., Ltd.	Constructing telephonic lines.	10,00,000	10,00,000	No. 7, Council House Street, Calcutta.
586	3rd Dec. 1889	Mohes Chundra Land Reclamation and Agricultural Improvement Co., Ltd.	Promoting agricultural improvements, &c.	2,50,000	2,50,000	
651	6th Nov. 1890	"Peshwa" Floating Syndicate, Ltd.	To set afloat wreck steamer <i>Peshwa</i> .	50,000	.....	No. 5/1, Mohes Chandra Chaudhury's Lane, Bhawanipur, Calcutta.
654	13th " "	Thompson's Carriage Co., Ltd.	Conducting carriage service in Calcutta.	5,000	.....	
685	20th April 1891	Garden Reach Land Syndicate, Ltd.	Traffic in lands and houses in Calcutta and Suburbs.	8,00,000	3,30,312	No. 219, Old China Bazar Street, Calcutta.
707	27th Oct. "	Thomson's Ink and Chemical Manufacturing Co., Ltd.	Manufacturing and selling ink.	50,000	15,825	
712	12th Dec. "	India General Gas Co., Ltd.	Manufacturing gas	4,00,000	.....	No. 4, Bentinck Street, Calcutta.
719	23rd Mar. 1892	Bengal Safety Match Manufacturing Co., Ltd.	Manufacturing safety matches.	1,00,000	58,262	
738	29th Dec. "	"Ruby" Patent Mica Non-conducting Boiler Composition Syndicate, Ltd.	Manufacturing mica engine packing and lubricants.	1,10,000	.....	No. 124, Canning Street, Calcutta.
746	20th April 1893	Chota Nagpur Free Labour Supply Co., Ltd.	Supplying labour, both skilled and unskilled, to those who may be in need of them.	20,000	1,200	
830	5th June 1894	Bengal-Nagpur Lime Co., Ltd.	Burning lime ...	1,00,000	23,000	No. 69, New China Bazar Street, Calcutta.
986	26th April 1895	Sulkea Manufacturing Co., Ltd.	Manufacturing umbrellas.	1,00,000	75,000	
039	28th Nov. "	Pioneer Fibre Co., Ltd.	To extract fibres from plants and trees.	28,000	.....	No. 37, Dhurumtola Road, Howrah.
1152	29th July 1896	Indian Glass Works, Ltd.	Manufacturing glass and glassware.	3,00,000	.....	
1193	29th Aug. "	Indian Artificial Tile Flooring Co., Ltd.	Manufacturing tiles, cement, lime, plaster of Paris and whitening of all kinds.	1,00,000	.....	No. 64, Dhurumtola Street, Calcutta.
Total others ...				34,18,000	17,53,599	

## No. IX.

*List of Companies limited by guarantee at work on 31st March 1898-99.*

Number on the register.	Date of registration.	Classification and name of Company.	Objects of the Company.	Number of members.	Situation of registered office.
1	2	3	4	5	6
		I.—BANKING, LOAN, AND INSURANCE COMPANIES.			
		(a) <i>Banking and Loan Companies.</i>			
		(b) <i>Insurance Companies.</i>			
838	15th Mar. 1894	Bikrampur Sangathan Samiti, Ltd.	Life insurance business.	20	Lohaganj, Dacca.
1114	27th May 1896	Tilli Debt Relief Fund Co., Ltd.	Ditto ...	5,000	Ditto.
435	21st Sept. 1898	Enginemens and Firemen's Union in India, Ltd.	Ditto ...	2,000	Ditto.
		II.—TRADING COMPANIES.			
		(a) <i>Merchants and Traders.</i>			
		(b) <i>Navigation.</i>			
		(c) <i>Railways and Tramways.</i>			
		(d) <i>Co-operative Associations.</i>			
		(e) <i>Shipping, Landing, and Warehousing.</i>			
		III.—MILLS AND PRESSES.			
		(a) <i>Cotton Mills.</i>			
		(b) <i>Jute Mills.</i>			
		(c) <i>Mills for Cotton, Jute, Wool, Silk, Hemp, &amp;c.</i>			
		(d) <i>Cotton and Jute Screws and Presses.</i>			
		(e) <i>Other Mills and Presses.</i>			
		IV.—TEA AND OTHER PLANTING COMPANIES.			
		(a) <i>Tea.</i>			
		(b) <i>Coffee and Cinchona.</i>			
		(c) <i>Others.</i>			
		V.—MINING AND QUARRYING COMPANIES.			
		VI.—ICE-MANUFACTURING COMPANIES.			
		VII.—SUGAR-MANUFACTURING COMPANIES.			
		VIII.—BREWERIES.			
		IX.—OTHER COMPANIES.			
61	20th June 1898	Bengal Chamber of Commerce ...	To promote and protect trade, commerce, &c.	200	No. 1, Clive Street Calcutta.
40	1st Nov. 1898	Bali Sadharani Sabha ...	To improve the condition of the Town of Bali, Balur, and other neighbouring places.	200	Bali, Howrah.

No. X.

*Statement of fees realized during the year 1898-99.*

				Rs. A P.		
Amount of fees realized under Act	VI of 1882	...	...	10,976	0	0
Ditto ditto	XXI of 1860	...	...	505	0	0
Total				11,481	0	0

**REPORT ON THE WORKING OF THE LICENSED WAREHOUSE  
AND FIRE-BRIGADE ACT, 1893, IN CALCUTTA  
DURING THE YEAR 1898-99.**

*No. 3822M.—The 22nd July 1899.*—The following report is published for general information.

F. A. SLACK,  
*Offg. Secy. to the Govt. of Bengal.*

No. 527J., dated Calcutta, the 22nd June 1899.

From—W. R. BRIGHT, Esq., c.s., Chairman of the Corporation of Calcutta,  
To—The Secretary to the Government of Bengal, Municipal Department.

I HAVE the honour to submit the following report under section 41 of Act I of 1893 (B.C.) of the Warehouses in Calcutta for the year ended 31st March 1899.

2. During the year under report the fees under section 10 of the afore-said Act continue to be levied at  $7\frac{1}{2}$  per cent. on the annual valuation of the Warehouses.

3. The following statement describes the result of applications for licenses :—

APPLICATIONS.		Total.	Nature of applications.	No. sanctioned.	No. refused.	No. pending.
Pending since last year.	Received during the year.					
1	2	3	4	5	6	7
6	31	37	Wood, &c. ...	31	4	2
1	4	5	Jute ...	2	.....	3
7	35	42		33	4	6

4. During the year under review 40 licenses were issued for 1897-98 and 575 for 1898-99. The following is a statement of the aggregate amount of receipts during the year :—

	Rs.	A.
License fees for 1897-98 ... ..	1,053	8
Ditto for 1898-99 ... ..	24,925	0
Mutation fees and fines ... ..	249	0
Total ... ..	26,227	8

5. Of 593 licenses for Warehouses in 1897-98, 450 were renewed, 29 cancelled as vacant or unoccupied or not assessable under the Act, while the license fees of 24 remained unrealised at the close of the year.

6. The following statement shows the receipts and disbursements of the Warehouse Fund during the year 1898-99 :—

RECEIPTS.	Amount.	Total.	DISBURSEMENTS.	Amount.	Total.
1	2	3	4	5	6
To jute warehouse license fees ... ..	Rs. A. P. 25,078 8 0	26,227 8 0	By contribution to the fire-brigade (exclusive of Rs. 23,497-8 paid from General Fund).	Rs. A. P. 23,760 0 0	23,760 0 0
.. miscellaneous receipts and fines ...	249 0 0				
Balance at commencement of the year—			Balance at close of the year—		
Cash in the Bank of Bengal ... ..	23,426 8 9		Cash in the Bank of Bengal ... ..	24,495 0 9	
.. with Treasurer ... ..	9 0 0		.. with Treasurer ... ..	36 0 0	
	23,435 8 9			24,531 0 9	
Due to General Fund ... ..	2,205 0 0	21,170 8 9	Due to General Fund ... ..	101 0 0	24,633 0 9
Total ... ..	.....	47,398 0 9	Total ... ..	.....	47,398 0 9

7. Appended is a list of Warehouses licensed in 1898-99.